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Electrical Contracting

With Which Is Incorporated
The Electragist

Sept.
1930

Miles of
333 Metal Molding
can be installed without
a clip or strap

EASIEST - QUICKEST
AND NEATEST WAY
TO ADD AN OUTLET



National Electric Products Corporation
National Metal Molding Division
Pittsburgh, Pa.



If you expect

--a toggle switch not designed for type "C" lamp load to do the job--

--a shunted double pole switch to carry the initial type "C" lamp surge



you must expect
the Inevitable...
Burned Contact



SWITCH Contacts make and break a circuit. The life of the switch depends upon the manner in which this function is performed.

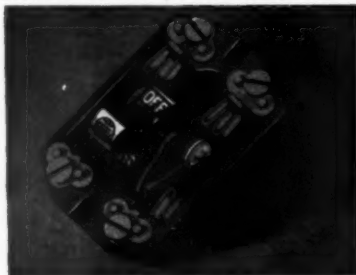
If contacts are not designed to carry the enormous inrush of cold filament load of the type "C" gas filled lamp, which is often eight to twelve times higher than the normal current, they will bounce, burn and pit. Switch failure is inevitable.

Shunting a double pole switch to produce greater carrying capacity will not solve the problem. Burning of contacts is not the result of carrying capacity but of design.

Any contact and blade which permits recoil or vibration on the make will burn and pit under the heavy load of fusing current.

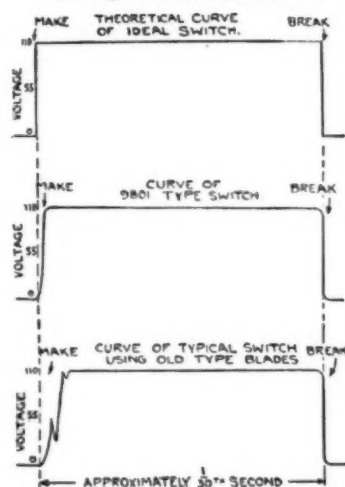
The new Hubbell Switch positively eliminates burned contacts. Switch failure is banished, longer switch life is assured. "It's in the design."

HARVEY HUBBELL, INCORPORATED
BRIDGEPORT, CONNECTICUT



A New Switch With A New Rubber Handle

Oscillograph Chart
Showing action of 9801 Switch



The bouncing of contacts of the old type switch will cause serious burning and pitting. The 9801 switch shows a much closer approach to the ideal make. Observations of breaking speed on 660 watts indicated that the 9801 switch required approximately one half the time of the old type to completely open the circuit.

HUBBELL
Toggle Switches

Electrical Contracting

With Which Is Incorporated The Electragist

Victor A. Hanson,
Managing Editor

S. B. WILLIAMS
Editor and General Manager

Walter Holmes
Eastern Field Editor

Coit A. Smith
Western Field Editor

Vol. 29

SEPTEMBER, 1930

No. 11

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RESALE PRICE NEWS

Prices have been much steadier during the past month than at any time before this year. Reductions still are the rule with lower prices to be found in:

Boxes and covers

Brackets

Armored cable, especially lead covered

Adapti fittings

Couch mail boxes

Rubber covered and weather-proof wire and large cable.

Sangamo time switches and Lewis meter and switch cabinets have been added to the listings.

Wadsworth switch listings have been given a new set-up which provides more detailed information.

Prices on conduit, bends and elbows have been adjusted.

A survey recently completed covering a third of our circulation list revealed that 87.9 per cent of our readers are using the Resale Price Service. New England apparently uses the service the most with the contractors in the East, South and Central States the least.

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Also publishers of *The Jobber's Salesman* and *Mill Supplies*



ROMEX is constructed for faster safer wiring

Look at the RomeX features — each a story in itself. It is light, flexible, easy to run. It slips thru holes in studs or joists, or fastens with a few simple straps. Special fittings are not needed.

See how easy RomeX is to strip. Theripcord opens the strong, non-metallic sheath as fast as it's pulled. The tough, kraft tapes practically unwind themselves. Connections are easy to make.

You can do more jobs and better jobs with RomeX. You have something *convincing* to talk about to your customers—besides merely quoting a price and letting it go at that.

Send for a sample of RomeX. It will be sent you, along with a book explaining RomeX in detail.

GENERAL CABLE CORPORATION

EXECUTIVE OFFICES: 420 LEXINGTON AVENUE, NEW YORK • OFFICES IN PRINCIPAL CITIES



A. B. C.

ELECTRICAL CONTRACTING is now a member of the Audit Bureau of Circulations.

Early in the year we pledged ourselves to help manufacturers contact a wider market by providing a growing circulation. We have kept our promise. The A.B.C. statement shows that during the first six months of 1930 the paid circulation of ELECTRICAL CONTRACTING grew from 10,941 to 13,968—the only publication edited for contractors, the paid circulation of which did not fall off during that period.

This means that in less than two years ELECTRICAL CONTRACTING has built its circulation to the point where it now has the largest number of paid subscriptions going to electrical contractors of any publication of record.

Two years ago ELECTRICAL CONTRACTING announced its policy of constructive help for the contracting field: The Resale Price Service, the pictorial treatment of articles—both new, progressive and decidedly expensive programs.

• • •

OUR faith in this program has been justified. In that time we have almost doubled our paid circula-

tion—while renewals are exceptionally high for a mass field.

To be the leading publication in any field involves no small responsibility. The industry looks to that publication for leadership of policy, market programs and thinking. The leading paper must know its field and have its support. The leading paper must, at all times, not only be abreast of developments, but also must anticipate them. The leading paper must be courageous. It must champion its industry through thick and thin.

• • •

ELECTRICAL CONTRACTING has accepted all of these responsibilities. The response of the field, through the increased circulation, at a time when business was at a low ebb, is the best indication that the industry believes that ELECTRICAL CONTRACTING has measured up to these responsibilities.

ELECTRICAL CONTRACTING, the official journal of the Association of Electragists, mindful of the obligation imposed by this unqualified industry acceptance repledges its best efforts to service to the electrical contracting industry.



ANACONDA
from mine to consumer

**WIRING
PRODUCTS**

Rubber-covered Wire
Flexible Cords
ABC Armored Cable
Durax Sheathed Cable
Duraduct Loom
Flexible Steel Conduit

TWO MODERN PLANTS

Well Located to Provide
Prompt Service on

ANACONDA WIRING PRODUCTS

TWO fine factories devoted exclusively to the manufacture of Anaconda Rubber-covered Wire and other wiring products. Adequate jobbers' stocks in more than 100 cities. Prompt, dependable service everywhere on wires and cables for every electrical requirement.

ANACONDA WIRE & CABLE COMPANY

General Offices: 25 Broadway, New York City
Chicago Office: 20 North Wacker Drive Building
Sales Offices in Principal Cities

SEPTEMBER, 1930

Ghosts ~ *what ain't*

"I ONCE read a book," said John Wise, as he sat down at the Electric Lunch club table—

"Dot is nudding," broke in Moe Unterbidder, "my Chakey vot iss on'y six years alreatty has read a book."

"By a fella named Butler," continued John, not minding the interruption, "and it told about a little black boy who was afraid of ghosts. 'Dey ain't no ghosts,' everybody told him, but he was still scared. 'What yo scared of when dey ain't no ghosts?' said his mammy. 'I ain't afraid ob ghosts what am,' the little smoke replied, 'I's afraid ob ghosts what ain't.'"

"I was reminded of that story this morning," continued John, "when Carl Frisbee who works for a fixture factory told me about a job down the state he just helped a contractor to land."

"When Carl got there the contractor was figuring on a hanger priced at two-fifteen list. 'I can put in a low bid if I figure on this stuff,' he said."

"But Carl wanted to look at the job first, so they went over to the building which was a fine hospital, and Carl got acquainted with the architect's man and after while they went back to the contractor's place."

"'Lissen, fella,' said Carl, 'don't figure on

that cheap stuff. Here's the material you ought to sell,' and he pulls out a catalog sheet showing a fixture listing at five-seventy-five."

"Well," continued John Wise, "the contractor 'most fell dead. He talked a lot about price competition, but Carl said, 'What do you know about this competition?' and the fella didn't know anything—he just **thought** he'd have price competition. To cut it short, Carl made him bid on the decent material, and with a little salesmanship they got the order—578 units at \$5.75 list instead of \$2.15—a total at list of \$3323.50 instead of \$1242.70."

"That contractor was afraid of a shadow," said Carl to me. 'No,' sezzi, remembering the Butler fellow's story about the little coon, 'he was afraid of **ghosts what ain't**.' You fellows ought to read that book," concluded John Wise.





Electragists *Vote* Trade

WITHOUT a dissenting vote, the Association of Electragists, International, at its Thirtieth Annual Convention held at Milwaukee, August 18, 19 and 20, voted to apply to the Federal Trade Commission for a trade practice conference for the purpose of formulating rules of business conduct for the electrical contracting industry.

Three trade relations resolutions were adopted by the convention which, if followed through, should have a very beneficial effect upon the economic welfare of the industry. Practices to which the convention objected are: The new policy on the part of the lamp manufacturers of lowering the price of carton quantities without improving the dealer's margin; wasteful distribution practices of the jobbers; and unfair merchandising methods by central stations.

Over 400 people registered at the Hotel Schroeder including a large number of ladies. Officers of between thirty and forty local chapters were present, thereby giving to the convention an extremely earnest air and sustained interest.

The local convention committee under the

leadership of George Andrae had all of its plans working smoothly with the result that the convention went off without a hitch.

An elaborate entertainment program was provided that consumed every moment not spent in meetings.

Election

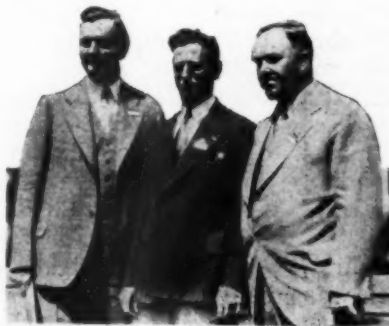
Three new executive committeemen were elected as follows: R. R.

Reid, Salt Lake City, for the Mountain Division, succeeding G. W. Forsberg; Louis Kalischer, Brooklyn, for the Eastern Division, succeeding Allan Coggeshall; Ernest D. Brown, Detroit, for the Great Lakes Division, succeeding John H. Busby. J. H. Schumacher, Winnipeg, Western Canadian Division and W. W. Ingalls, Miami, Southeastern Division, were re-elected. L. K. Comstock, New York, was elected executive committeeman-at-large.

By amendment to the constitution, it was voted to disband the two labor sections which had been in existence for a number of years.



George Andrae, vice chairman, Convention Committee.



A. E. I. Officers. Left to right: L. W. Davis, general manager; L. E. Mayer, president, and E. N. Peak, vice president.



dePractice Conference



**Louis Kalischer,
Winner McGraw
Award.**

Hot Springs in 1931

Just as the convention was closing, it was announced that the 1931 Convention would be held at the Arlington Hotel, Hot Springs, Ark., the week of October 5.

President L. E. Mayer, in opening the convention, emphasized particularly the importance of the chapter movement, calling upon members of the association to put chapters to practical use. This ad-

dress, which will be found on another page, also touched upon the work of quantity survey bureaus.

What was probably the most important work of the convention took place at this opening session when the delegates accepted recommendations of the Committee on Trade Practice Conference, of which L. K. Comstock was chairman. The recommendations of this committee included a number of proposed rules to be presented to the proposed conference. These rules, which will be found elsewhere in this issue, met with unanimous approval of the delegates and the executive committee was authorized to apply to

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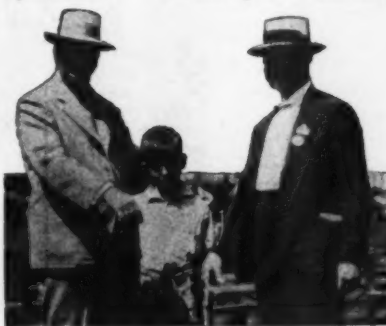
the Federal Trade Commission for such a conference. Following presentation of the rules, Max F. Burger, assistant to the commissioner of the National Plumbing and Heating Institute, Chicago, told the convention how the trade practice rules of the plumbing and heating industry were interpreted and enforced.

A general explanation of the operation of a trade practice conference was made by M. Markham Flannery, Federal Trade Commission.

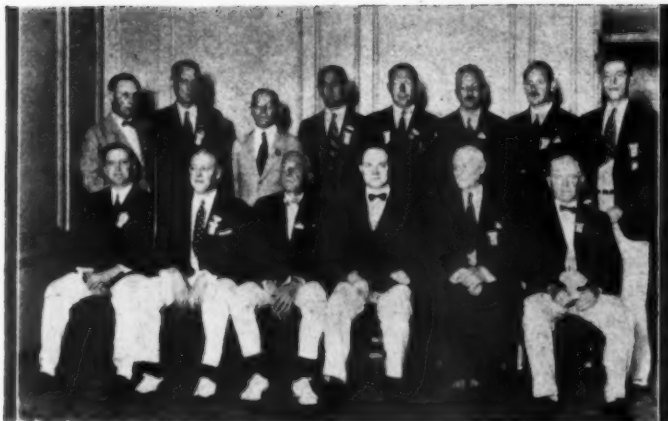
"The first requisite of a trade practice conference," said Mr. Flannery, "is a desire on the part of a sufficiently large number in that industry to eliminate such practices and to correct such conditions.

"If the spirit to eliminate indifferent standards is not sufficiently strong, then an industry is neither ready for nor capable of self-government. The purpose is to find a common ground upon which the members of an industry can legally agree to eliminate those practices that are unfair and wasteful and, therefore, unprofitable and for which no one in particular is responsible but from which, no doubt, all have suffered.

"Trade practice con-



Friendly Enemies:—Retiring chairmen of the closed and open shop sections which were dissolved at the convention. They are L. K. Comstock and S. J. Stewart.



Convention Committee: Left to right, seated: George H. Magaw, E. H. Herzberg, H. P. Andrae, George Andrae, S. A. Chase, A. L. Pond. Standing: W. H. Tholen, D. E. Webster, D. C. Lappin, J. C. Staff, J. U. Heuser, E. R. Knoerr, H. R. Allen and W. O. Zervas.

ferences are usually authorized on applications from industries. At times they are initiated by the commission. Before the commission authorized a conference, it must be satisfied that it has jurisdiction and that the holding of the conference is desirable and feasible.

"The question is frequently asked as to what percentage of an industry should join in or authorize an application. At least 50 per cent of the industry is usually required before final authorization is granted. If the application is made on behalf of an association or group which represents over 50 per cent of the industry, either in number or by volume, the necessity for otherwise determining the percentage is obviated."

Clarence L. Collens, president, NEMA, the subject of whose address was "Local vs. National Viewpoints," stressed the value of standardization and in this connection said, "To increase this distribution margin, the manufacturer has put much effort behind the standardization of products and of acceptance conditions. In the degree in which standard acceptance differences are adhered, the differences in local communities disappear and the national plan meets the local requirements, and consequently the needs of the contractor."

Motor distribution problems and policies were outlined by C. F. Pittman, a member of the NEMA Joint Committee on Motor Merchandising. An abstract of Mr. Pittman's remarks will be found elsewhere in this issue.

Louis Kalischer, chairman of the New York Modernization Committee and chairman of the A. E. I. Motor Section, together with E. A. Steinbuehler, industrial engineer of the Brooklyn (N. Y.) Edison Co., outlined before the convention the New York plan for electrical modernization of industries. This plan, which is given in some detail later on, held the interest of the convention for a considerable period.

Marshall E. Sampson, vice president,

N. E. L. A., in discussing central station merchandising, urged that all factions of the electrical industry stop "passing the buck." In the course of his remarks, he answered a number of questions which the management of the association had proposed to the NELA.

O. Fred Rost, director, survey of distribution, McGraw-Hill Publishing Co., New York, answered the subject "Can the Electrical Dealer Stay in Business?" by saying "that if he keeps himself abreast of the times, studies his merchandise, the market that his trading territory affords him, and last, but not least, studies intensively the methods of his competitors and copies or improves upon them as far as possible, he not merely can stay in business, but will stay in business."

An economic analysis of the electrical contracting business was presented by Howard Ehrlich, president, Electrical Trade Publishing Co., Chicago, in the form of a number of charts showing how the industry is broken down into classifications by volume, the size of the market, the channels of distribution, etc. Mr. Ehrlich opened his address by saying that faith in the electrical contracting branch of the industry was most necessary to its proper economic progress and with that as a foundation, showed the present important economic position of the contracting business.

G. S. Merrill of the lighting economic section of Nela Park, Cleveland, pointed out the effect of the voltage drop in wiring, using a lighted chart for illustration.

A. Penn Denton, engineer-director, Armored Conductor and Metallic Flexible Conduit Section, NEMA, in discussing the subject, "Can We Legislate Adequate Wiring?" pointed out that there were two groups of adequacy and standards. One deals with minimums which assure safety from casualty and property hazards. The other deals with superservice which provide copper



Executive Committee, left to right, seated: E. N. Peak, C. L. Chamblin, L. E. Mayer, J. A. Fowler, F. T. Langford. Standing: L. K. Comstock, W. W. Ingalls, S. J. Stewart, R. A. L. Gray and J. H. Schumacher.

Electrical Contracting, September, 1930

CONSUMERS' LAMP DISCOUNT DISAPPROVED

WHEREAS, lamp manufacturers have announced a consumers' discount schedule to take effect September 1, 1930, without providing a proportionate increase in the dealer's margins, and

WHEREAS, these consumers' discounts will not tend to increase the ultimate sale of lamps, but will necessitate a material increase in the volume of sales of lamps by the dealer in order to equal the same amount of profit that he was formerly allowed;

THEREFORE, BE IT RESOLVED that this Association goes on record as disapproving this consumers' discount schedule of lamp manufacturers, unless a proportionate increase in the dealer's margin of profit is provided.

Resolution adopted by Association of Electragists,
Thirtieth Annual Convention, Milwaukee, Wis.,
August 18, 19 and 20, 1930.

capacities greater than is required for present use.

The first group can and is now legislated but the second group is a matter for commercial endeavor—better selling.

George P. Hambrecht, Wisconsin State Director of Vocational Education, gave a most inspiring address on Apprenticeship Training, covering largely the material given by V. E. Anderson in the August issue of *ELECTRICAL CONTRACTING*.

The last address was by R. W. Staud, advertising manager of Benjamin Electric Mfg. Co., Chicago, who outlined the commercial and industrial lighting market development program, which has been developed under the auspices of the Society for Electrical Development.

Chapter Round Table

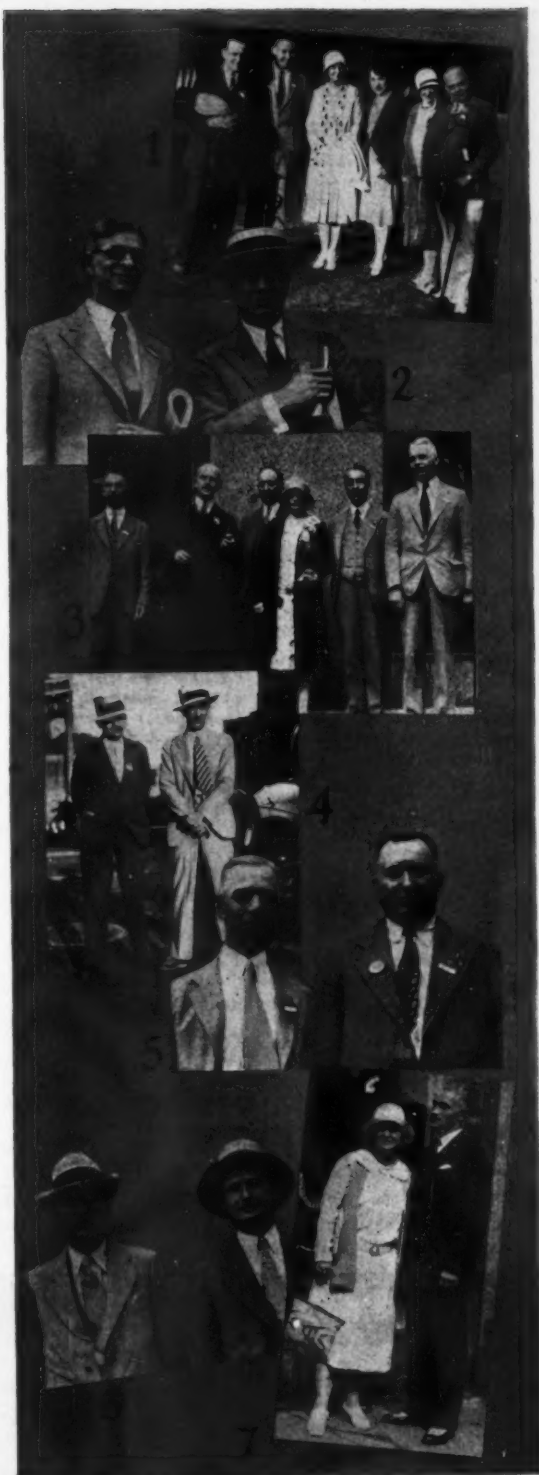
Thirty-three chapters were represented at the Round Table Conference of chapter presidents and secretaries with the executive committee. A new plan for giving chapters more complete jurisdiction in their localities through the signing by members of waivers was explained. Credit control came in for considerable discussion and the executive committee explained that it was still trying to secure a plan that would be acceptable both to the contractors and the wholesalers. Chapter dues and the methods of assessing dues were discussed at some length but there seemed to be no uniformity of practice.

The motor specialists' section again had an opportunity, through its joint committee, to discuss its distribution policies with a similar committee from the manufacturers.

At the merchandising policy session, objections were voiced from many sections of the country with regards to utility sales policies with the result that a resolution on this subject was brought on the floor of the convention and passed.

The McGraw Award was given this year to Louis Kalischer of Brooklyn, N. Y., and chairman of the motor specialists' section, in recognition of his constructive contribution to the advancement of cooperation in

Electrical Contracting, September, 1930



1. From New York, left to right: Al. A. A. Tuna, Mr. and Mrs. William Wheeler, Mrs. Fred Kraut, Mrs. and Mr. Hugo Tollner. 2. A. L. Abbott and Victor Tousley. 3. Canada, E. F. Streb, Saskatoon; R. A. L. Gray, Toronto; Mr. and Mrs. J. H. Schumacher, Winnipeg; A. E. Godsmark, Winnipeg, and J. R. Young, Regina. 4. From Milwaukee, E. G. Ehlenbach and E. J. Ensweiler. 5. R. E. Newhouse and H. B. Rickard. 6. B. T. Dawkin and C. O. Davis. 7. Mr. and Mrs. A. L. Evans.

Recommended Policy for ELECTRICAL WHOLESALE DISTRIBUTION

WHEREAS, the present sales policy of many wholesale electrical supply jobbers, manufacturers, fixture manufacturers, and distributors is detrimental to the best interests of responsible electrical contractor-dealers; and

WHEREAS, This policy, by failing to properly classify trade accounts and define those individuals and firms qualified to buy at wholesale prices, is rapidly undermining the contractor-dealer's position; is resulting in economic loss to the electrical industry as a whole and is foisting upon the public an inferior and inadequate service; and

WHEREAS, the cost of distribution has not paralleled the cost of manufacture in its downward course, through the employment of the most economical methods, and

WHEREAS, this cost can be greatly reduced by the elimination of seemingly unnecessary items, such as

1. The too wide distribution of costly price-books and catalogues.
2. The duplication of expense due to excessive numbers of competing salesmen.
3. The burden of a large number of small and unprofitable accounts acquired through the operation of present lax credit restrictions;

THEREFORE, BE IT RESOLVED: that we recommend, That wholesale electrical distributors restrict their sales of electrical materials and supplies at wholesale prices to only electrical contractors and contractor-dealers, and to those dealers who are purchasing for resale, except to the following classifications who may be also entitled to buy at dealers' prices, when purchasing for plant or manufacturing purposes only.

- (a) Central Stations
- (b) Steam and Electric Railways
- (c) Federal, State and Municipal governments
- (d) Large industrials, maintaining a permanent electrical construction department
- (e) Motion Picture Studios
- (f) Manufacturers purchasing electrical materials for fabrication in their products
- (g) Established dealers purchasing for resale.

Resolution adopted by Association of Electragists, Thirtieth Annual Convention, Milwaukee, Wis., August 18, 19 and 20, 1930.

the electrical industry by inspiring and organizing the Electrical Modernization of Industries Campaign in Greater New York, resulting in substantial progress in industrial electrification, improved industry cooperation

within the five boroughs and the stimulation of modernization work in other cities.

The convention reaffirmed the association's endorsement of the Utilities Indemnity Exchange, conducted by Lynton T. Black & Company of St. Louis, as "a medium deserving the friendly support of the members of the organization. The Association and the Exchange have worked together over a period of fifteen years.

The convention sessions came to a close with the election of executive committeemen for the districts which had a one-year office last year. From now on every district will have a new election every two years. Officers of the Association serve for two years and for that reason were not voted for this year. The results of the election for executive committeemen were given earlier in this article.

The Credentials Committee again had to refuse voting privileges to paid secretaries of Chapters in spite of the fact that they had voting proxies. The manner in which voting shall be done is explicitly covered in the by-laws.

AMENDMENTS TO CONSTITUTION

Amend Article VII, Section 1, as follows:

Strike out the last clause, reading "and two members elected by the Labor Sections as hereinafter described".

Insert as the last clause of Section 1, the words—"and one, two or three members-at-large to be elected by the executive committee at its discretion at its first meeting after each annual convention, for a term of one year or until their successors shall be elected".

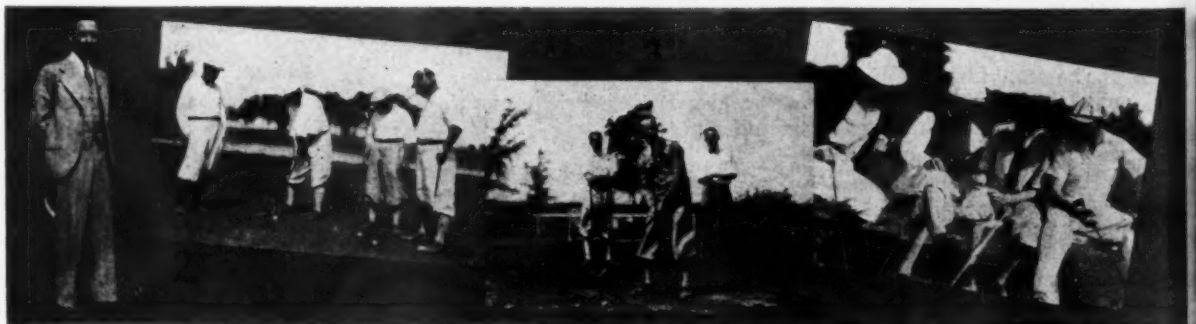
Article VII, Section 1, will then read:

"The management of the Association shall be vested in an executive committee consisting of the President, the Vice-President, one member elected by each division in the manner hereinafter described, and one, two or three members-at-large to be elected by the executive committee at its discretion at its first meeting after each annual convention, for a term of one year or until their successors shall be elected."

Strike out the entire Article XI of the Constitution referring to Labor Sections.

Renumber Article XII to read "Article XI".

Passed by Association of Electragists, Thirtieth Annual Convention, Milwaukee, Wis., August 18, 19 and 20, 1930.



With Manufacturer and Jobber friends: 1. Art Hearl. 2. R. B. Randall, C. A. Lundberg, S. M. Kahn and George S. C. F. Pittman, W. O. Zervas and J. U. Heuser. 6. Bill Martin, R. J. Franzel, D. E. Webster and A. L. Evans. Trayser, H. P. Trostorff and O. F.

As previously stated, an elaborate entertainment program was furnished, the high spots of which were an afternoon's outing at Waukesha Beach with men's golf at the country club, ladies' golf and bridge, baseball, swimming, boatrides, etc., concluding with a chicken dinner in the evening and dancing; a fine cabaret and informal dance Tuesday evening and the annual banquet with entertainment and dancing Wednesday evening.

The Milwaukee committees in charge of all convention activities came in for well deserved praise from everybody attending the convention. They were as follows:

General Committee: H. P. Andrae, general chairman; George Andrae, vice chairman; Contractors: Rudolph R. Knoerr, George H. Magaw, E. H. Herzberg, J. C. Staff, Hans Tholen; Wholesalers: P. R. Boole, W. H. Tompkins, J. A. Johnson, David Lappin; Central Station: S. B. Way, G. W. VanDerzee, Frank Coffin, I. L. Illing, N. C. Christopherson; Manufacturers: J. U. Heuser, H. R. Allen, D. E. Webster, A. L. Pond; Electric League: W. O. Zervas.

Finance Committee: H. P. Andrae, chairman; S. B. Way, F. N. Greusel, P. W. Sprecher, F. W. Magin.

Women's Committee: Rudolph R. Knoerr, chairman; Mrs. H. R. Allen, vice chairman; Harry Russell, "Legal Advisor"; Mrs. H. P. Andrae, Mrs. N. C. Christopherson, Mrs. E. Ensweiler, Mrs. E. H. Herzberg, Mrs. Frank Oppitz, Mrs. Bert Stenz, Mrs. Bruno Barg, Mrs. Harry Russell, Mrs. J. C. Staff, Mrs. F. N. Greusel and Mrs. Walter Rohn.

Reception Committee: George H. Magaw, chairman; Samuel A. Chase, vice chairman; Charles Krech, Bert Stenz, John Beyer, Henry Adolphsen, J. A. Johnson, J. A. Webb, H. H. Hauge, H. L. Broan, I. L. Illing, F. D. Cooke.

Entertainment Committee: H. R. Allen, chairman; E. H. Herzberg, Hans Trostorff, Adolph Gogan, N. C. Christopherson, P. R. Boole, Edward Grieb, W. A. Haig, J. U. Heuser.

Golf Committee: Hans Tholen, chairman; Mrs. N. C. Christopherson, chairman ladies' golf; J. C. Schmidtbauer, D. E. Webster, A. L. Pond, Mrs. H. R. Allen, Mrs. J. U. Heuser, P. R. Boole, Frank Oppitz.

Transportation Committee: J. C. Staff, chairman; J. J.



Cutler-Hammer Drum Corps Which Entertained the Convention Monday Afternoon.

Thompson, J. P. Mehigan, H. A. Balding, Walter Rohn, A. H. Fuhr.

Publicity Committee: W. O. Zervas, chairman; F. E. Erikson, Henry Czech and Herbert E. Boning, Jr.

TO STUDY UTILITY SALES POLICIES

WHEREAS, for a number of years electrical contractors and dealers have been confronted with a problem of growing seriousness, arising from certain merchandising policies of power companies, and

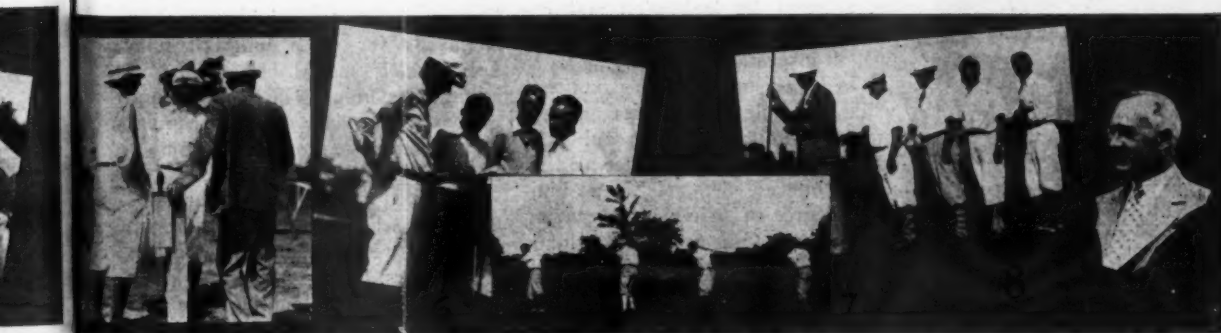
WHEREAS, these policies are, in many districts, destroying co-operation and mutual confidence between these branches of the electrical industry; and are, in some districts, engendering agitation for government ownership of electric power facilities and for increased restrictive regulation, and

WHEREAS, the foregoing conditions are rapidly creating a national problem of imminent concern to this Association;

THEREFORE, BE IT RESOLVED that the management make a careful study of the effects of merchandising policies of power companies, as reflected in the experience of its local Chapter members, and

THAT following the next regular meeting of the A.E.I. Executive Committee, a report of local conditions relating to this matter, then existing, be sent to members of this Association.

Resolution adopted by Association of Electragists, Thirtieth Annual Convention, Milwaukee, Wis., August 18, 19 and 20, 1930.



1. Messrs. Barley, Kirkland and Gosney. 2. F. B. Adam, G. A. Yates, F. Kraut and Riley Delano. 3. E. Welton, G. H. Luedeking, K. H. Archie and N. C. Christopherson. 4. J. U. Heuser, P. R. Boole, F. W. 5. Bill Campbell.

Can we Legislate ADEQUATE WIRING

By A. PENN DENTON

Engineer-Director

Armored Cable Section of N. E. M. A.*



1. F. S. Berry, W. L. Marks and J. O. Kelso, Chicago. 2. E. H. Grieb, E. A. Killoren and A. W. Schwind. 3. W. F. Peters and John Ledbetter. 4. V. W. Hartley, San Francisco, and A. R. Erwin, Hammond. 5. Frank Casey, Chicago, D. A. Gilbert and C. L. Steber. 6. Earl Peak, Jr., Marshalltown, Iowa, Tom Ward, Bill Moms and E. G. Ehlenbach, Milwaukee.

ADEQUATE wiring is difficult to define, since adequacy is relative only, so we are primarily concerned with the degree of standards of adequacy. It is the standards of adequacy in wiring with which the industry should be concerned and preparing at this time, because we have always lacked them.

In my opinion, standards of adequacy in wiring must be divided into two groups. In group one we may place all wiring regulations or standards which provide, as in our National Electrical Code, a minimum safe wiring installation which assures the public using electrical service, safety from the standpoint of casualty and property hazards.

In group two we shall place the standards which provide for a super or superior wiring installation which will include copper capacities 50% to 100% greater than the immediate connected load will require to assure the safety to life and property.

The wiring standards of group one have always been, and may always be, adopted by legislation and enforced by the insurance or governmental inspection authority.

The super standards of group two, while desirable at all times and approved by our industry, cannot be enforced by legislation, since all that public interest demands is a minimum degree of safety in the wiring installation. Our group two standards of adequate wiring we must sell as a commercial problem, one that concerns all groups of the industry.

It is true, and of great interest to note, that as our industry has grown, the maximum or super standards of

one period become the minimum safe standards of a decade later.

A recent survey made in Chicago developed the startling facts that practically all commercial and residential buildings built in that city in the three or four years prior to the time the survey was completed, were either loaded to capacity, or so overloaded as to actually become, in many cases, electrical fire hazards. This same condition of inadequate building wiring is common to all cities.

Referring again to minimum safe wiring standards, there is much we can do to improve the minimum regulations of local and national codes. The contractors and inspectors should be particularly concerned with improved minimum adequacy standards for wiring.

Too long we have guessed at wattage values for given outlet or circuit needs. The Society for Electrical Development, in the studies which Mr. Arthur L. Abbott has made, have developed valuable data for minimum branch circuits and outlet requirements, giving wattage standards for given units of floor area, which should be adopted as minimum standards in our local and national codes, as standards. Similar requirements are needed for commercial and industrial buildings.

We need improved standards of adequacy which should be minimum safe code requirements for services and feeders, both lighting and power wiring, based on building size and floor areas.

*Abstract of address delivered at the 30th Annual Convention, Association of Electragists, Milwaukee, Wis., August 20.

Association *Grows under* CHAPTER PLAN

By L. E. MAYER
*President, A. E. I.**

OUR Association is growing rapidly and is changing in its membership from the old time plan of every man for himself into chapter organizations which represents strength, unanimity of action, and a power that is fast becoming recognized as an International Association locally represented, which affords us some wonderful opportunities for an increase in our membership. It gives your officers information as to the wants of local chapters and develops better conditions which are bound to be helpful to the contractor and dealer throughout our entire membership. We are not, however, overlooking the value of our individual members, as some localities are not large enough for a chapter.

Delegates appointed by our local chapters bring to our convention constructive plans, all of which are most desired and helpful to the growth of this Association.

Great credit should be given the men who were responsible for the revision of our By-Laws that made the chapter movement possible.

MORE chapters are needed and should be organized, and I sincerely trust that every member will endeavor to bring about a chapter in their locality where none is now operating.

Our staff is ready and willing to assist in



the formation of chapters and await the request of our membership. Let us endeavor to organize at least one hundred and twenty five chapters by March 31, 1931.

As our chapter movement has rapidly developed, so has the desire of local chapters to establish Quantity survey bureaus where estimates are compiled and quantities given to its subscribers. Many plans are now in operation throughout the country and from every indication is becoming more uniformly accepted as the one important undertaking to bring about a better contracting industry, uniformly established and practical in its application.

*Abstract of president's address delivered at the 30th Annual Convention, Association of Electragists, Milwaukee, Wis., August 18.

Some localities are giving the quantities of material and leaving to their subscribers the pricing of labor and material as may be necessary for each project. In other localities, firm costs are established, including such items as job overhead, engineering, insurance, inspection, and other miscellaneous items which become a job factor and expense to the contractor. It is then sent to the subscriber, whereon he applies his overhead and percentage of profit.

Our Association can well be proud of the adoption of the credit control plan recommended as the one solution to eliminate the unscrupulous extension of credit to contractors and dealers who are not operating on an ethical business basis, the effect of which is resulting in the elimination of this class of contractor from our competitive field.

Much work is yet to be done in order to develop a uniform application of the plan, not only by the contractor, but by the wholesaler and jobber, who can materially assist in correcting an evil which is one of the factors that has done more to disorganize contractors, and to place the entire industry in a chaotic condition.

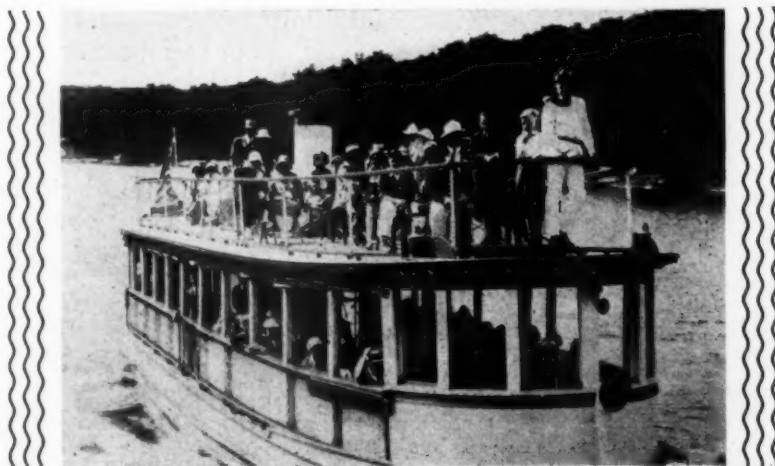
A special committee has been working for several months in the preparation of a trade practice conference with the Federal Trade

Commission, of which Mr. L. K. Comstock is its chairman.

APRESENTATION of principles of fair practices will be submitted by the chairman and it is urgently requested that the membership give due consideration after the submission of the plan to such a conference.

It has been my pleasure to address several contractors' meetings throughout the country and my only regret is that time did not allow me to cover a larger number of cities, as I was indeed gratified to find that in the several associations that I had the privilege to address, the uniform desire of all local organizations, was to become a part of our International Association, and to find the wonderful co-operative spirit that has developed over the country. May the good work continue.

I am of the firm opinion that contractors in general are becoming better business men, realizing the importance of co-operation which is so essentially necessary to the building up of good business, founded on the principles of fairness to his competitor and honesty with himself, being mindful that the entire building industry is interested in the electrical contractor and is rapidly recognizing him as one of the important factors in the great advancement of building construction.



Electragists on a steamer ride around Pewaukee Lake

Motor Distribution POLICIES

By C. F. PITTMAN

Member N. E. M. A. Joint Committee on Motor Merchandising*

THERE are, of course, many methods of distribution, but these may be subdivided into two broad classes; first, direct selling by the manufacturer through his own salesmen; and second, resale agencies, which again may be logically subdivided into two main divisions; first, the machinery manufacturers or their agents who sell the motor as a part of their motor-driven machines; and second, the resale agencies, of which the most important are the motor dealers.

To show that the three elements, the product, the market and the method of distribution must be considered simultaneously, take these three cases; first, a 10,000 H.P. motor driving the main rolls in a steel mill; second, a 5 H.P. motor driving a line shaft in a small machine shop; third, a 1/50 H.P. motor driving a vacuum cleaner. In each case not only the product but its market and the buying habits of the user all have their influence on distribution. In each case economics dictate the avenue of distribution.

The company with which I am connected believes that there is an economic place for the motor dealer in the field of motor distribution, and I feel that many other manufacturers have a similar view. Personally, I feel that in the past, at least, the legitimate field for the operation of the motor dealer has not been recognized by the dealer himself. Once he has found his field, he must then become a strong, aggressive selling force and not simply an order taker. He must not expect to obtain business on price alone, nor give away his legitimate profits as has been too frequently the case in the past.

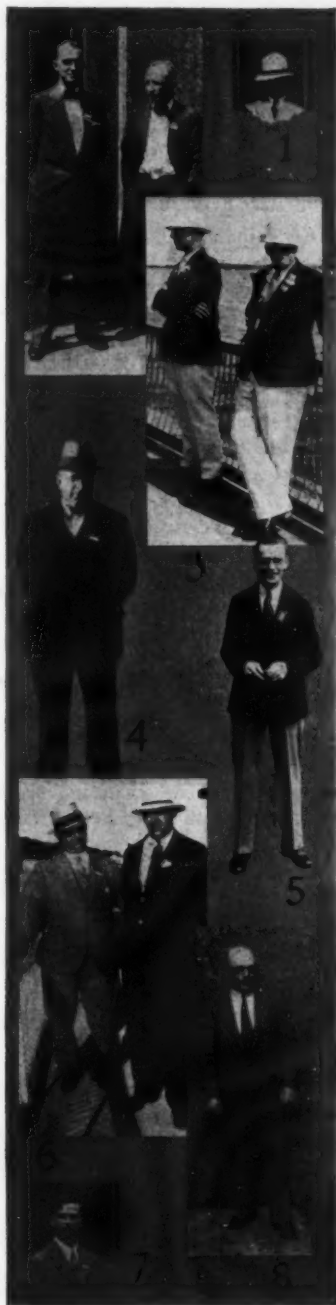
*Abstract of address presented at 30th Annual Convention of Association of Electricians, Milwaukee, August 19

On the other hand, I feel that the manufacturer has not been able to set up a selling policy which will adequately protect the motor dealer in the field which he should economically serve. Furthermore, after securing his franchise, the motor dealer has too often been left without further assistance from the manufacturer, with the result that he is not kept posted on the design, construction, and application of motors he has tried to sell, and he has lost interest in the welfare of the company he represents. The manufacturer should be able to continually assist the dealer in improving his sales methods, in the analysis of his local market, and in improved service to his customers.

Since there have been shortcomings by both parties, we should both rejoice that through our Joint Committee we have the means whereby we may frankly tell each other our problems, that we may arrive at solutions mutually satisfactory.

There are four elements that determine the goods you buy and they are price, design, delivery, and service. Price and delivery are problems requiring solution between each dealer and his manufacturer. The question of design includes all such problems as the construction of the product, its adaptability for the specific job, and the ability of the product to give service. I feel that manufacturers and dealers alike are lax in informing themselves of the merits of their product.

The most important of all these questions so far as it affects the motor dealer and his future, is that of service. Unless he can hold an economic place in the field of motor distribution because of the excellency of his service, the law of economics will force him out.



1. Jack Caddigan; 2. D. B. Clayton, Birmingham, and Geo. McKee, Atlanta; 3. H. C. Adolphson and H. L. Brown, Milwaukee. 4. E. E. Evans, Columbus; 5. Cy Geisbush, New York; 6. From Philadelphia, J. C. Wolf and W. A. Pangborne; 7. L. A. Phillips; 8. Billy Marks, Chicago.

Proposed TRADE

INDUCING BREACH OF CONTRACT

Knowingly to submit a bid after a contract has been awarded to a competitor, with the intent of injuring the competitor, or inducing or attempting to induce the breach of a contract between a competitor and his customer, is an unfair trade practice.

DEFAMATION OF COMPETITOR

Dissemination of false or misleading information relative to a competitor's business integrity, his ability to perform work, his credit standing, or the quality or reliability of his materials is an unfair trade practice.

SELLING BELOW COST

The furnishing or selling of services or materials at or below cost for the purpose of injuring a competitor and/or with the effect of lessening competition is an unfair trade practice.

EVASION OF RULES AND REGULATIONS

To use methods of installation of electrical work not in accord with the applicable governmental laws, rules and regulations obtaining in the territory affected is an unfair trade practice.

SUBSTITUTION OF INFERIOR MATERIALS

To use or to substitute materials in an electrical installation inferior in quality to those specified by the purchaser, without his knowledge or consent, or to those required by the applicable governmental laws, rules and regulations in the territory affected, is an unfair trade practice.

ENTICEMENT OF EMPLOYEES

Interference with a competitor's business through the enticement of his employees from his employment is an unfair trade practice.

PRICE DISCRIMINATION

The secret payment or allowance of rebates, refunds, credits or unearned discounts, whether in the form of money or otherwise, as a means of affecting or concealing price discrimination, or secretly extending to certain purchasers of special privileges, including discriminatory allowances for engineering, architectural or other services, not extended to all purchasers under like terms and conditions, is an unfair trade practice.

UNFAIR PRACTICES IN BIDDING

The wilful obtaining and using surreptitious advance information relative to competitors' bids in the preparation of one's own bid, is unfair and is condemned by the industry.

For any person, firm or corporation to aid or abet another engaged in unfair trade practices is condemned by the industry.

*The convention of the
authorized the Trade Prac-
tical contracting industry
Federal Trade Commission*

UNFAIR DISCRIMINATION AGAINST BIDDERS

The following practices of discrimination against invited bidders, extending secret and undue advantage to any one bidder or deceiving any bidder are condemned by the industry:

The inducing or attempting to induce an architect, owner or builder to reveal to any bidder on a competitive job information relative to bids already received which information would give the favored bidder an advantage in the preparation of his own bid is condemned by the industry.

To induce or attempt to induce an architect, owner or builder to reveal to a bidder the amounts and conditions of the bids received on a competitive job, with a view of giving the favored concern an opportunity to meet or cut below the lowest bid, whether the favored concern was one of the original bidders or not, is condemned by the industry.

To mislead or deceive any bidder as to the amounts and conditions of other bids, with a view to inducing him to cut his own bid, is condemned by the industry.

A submission of subsequent bids after bids have been received, opened and closed, unless there is a change from the original plans and specifications of 10 per cent or more in the quantities of material or labor, or both, within a period of 30 days, is hereby condemned by the industry.

CLOSING DATE FOR BIDS

In all cases of competitive bidding, a definite closing date should be set. Before the closing date all bids should be held confidential in all of their details; after the closing date, they should all be revealed in full to all of the bidders. The procedure of the United States Government in handling competitive bids is recommended for general adoption.

"SHOPPING" OF BIDS

It is a frequent practice for electrical contractors to submit bids to general contractors who in turn use the lowest acceptable price from the several trades in making up their bids on a general contract. Many general contractors after securing the general contract then re-open the bidding for the same operation, commonly known as "shopping", which practice lowers the standard and quality of electrical installations and building construction. Such practice is condemned by the industry.

ELECTRICAL CONTRACTING PRACTICE Rules

the Association of Electragists
Practice Conference of the elec-
stry under the auspices of the
sion to adopt these rules.

REQUESTS FOR BIDDERS

The industry favors the adoption of the following rules for calling for bids:

In all cases where competitive bids are requested, no one shall be invited to bid, to whom the contract would not be willingly awarded in case his bid is the most acceptable in itself.

Where accurate estimates are desired for information only, a reasonable fee or fees shall be paid to the parties preparing them.

Plans and specifications shall be sufficiently complete to enable competent bidders to estimate accurately the amount of material and labor required.

Invited bidders, provided they actually submit bids, shall not be required to pay for the use of plans and specifications.

A reasonable time shall be allowed for preparation of estimates.

The industry approves a method by which bidders file copies of their bids with a designated depository; the same to be kept sealed and confidential until after the day of closing, or after the letting of the contract, following which they may be disclosed to all bidders.

INTERPRETATION OF SPECIFICATIONS

Where a bidder requests an interpretation of some feature of the specifications by the buyer or his representative before submitting his bid, which would materially affect the cost of the work, the same information should be submitted to all other bidders by the architect, or those requesting bids.

DEFINITION OF COST

The term "cost," as used in the Rule against selling below cost, shall be interpreted to include among other items the cost of materials, transportation thereof, labor of installation, depreciation of tools and equipment, obsolescence, interest on investment, selling and administrative expense including insurance.

TERMS OF SALE

The industry hereby records its approval of the practice of making the terms of sale of electrical products a part of all published price schedules, and the failure on the part of wholesale distributors or manufacturers to strictly adhere to such terms of sale and enforce collection under such shall be termed an unfair trade practice.

DIFFERENTIALS

Recognizing that the expense of handling, selling and delivering electrical products by wholesalers is appreciably higher for small-quantity than for large-quantity lots and that the failure to apportion to each quantity lot of electrical products its correct proportion of such expense necessarily increases the cost of other sales, the industry hereby records its approval of the principle of a reasonable differential in prices in the several types and characters of sales.

DEFINITION OF WHOLESALER

The industry hereby records its approval of the definition of a qualified wholesale distributor to be one whose principal business is selling to the retail distributor, carries a well selected stock of merchandise, buys in suitable quantities, warehouses a reserve stock for retailers within a radius of economical distribution and convenience of service, resells in proper units to the retailer as economically as possible, assumes the credit risk and such other obligations as are incident to the transportation, warehousing and distribution of the products of the industry.

COST FINDING AND ESTIMATING

It is the judgment of this industry that an accurate knowledge of costs is indispensable to intelligent and fair competition, and the general adoption of accurate and uniform methods of cost finding and estimating is strongly recommended.

NATIONAL ELECTRICAL CODE

In territories where no governmental laws, rules or regulations as to electrical installations prevail, the regulations as laid down in the National Electrical Code, as approved by the American Standards Association, shall be used.

PAYMENTS UNDER CONTRACTS

The prompt making of current partial payments as they fall due under any contract should be of the essence of the contract itself: failure to make them on time should justify the contractor in suspending all work, whether of deliveries of materials or installation of same, or both, until payments are brought up to date; the time involved in any delay due to this cause should be added to the time of completion of the contract, and such delays in payment should further be treated as defaults of the same character as when the contractor fails to comply with the terms of the contract as to time and rate of completion.

ARBITRATION

The industry approves the practice of handling disputes in a fair and reasonable manner, coupled with a spirit of moderation and good will, and every effort should be made by the disputants themselves to arrive at an agreement. If unable to do so, arbitration under any prevailing codes should be agreed upon.

Electrical of Industry



1. C. A. Rowley, Clyde L. Chamblin and Frank Connelly, California; 2. C. N. Shannon, Denver; 3. H. W. "Hobe" Barnes, New York; 4. E. C. Carlson, Youngstown, Ohio; 5. W. W. Ingalls and V. L. Turner, Miami.

OBSOLETE equipment in many industrial plants is conclusive evidence that many managements have not laid the foundation for permanent prosperity. From the start of the world's war manufacturing companies have grown so rapidly that sufficient thought has not been given to scientific layout and total utilization of modern inventions. Thus are found innumerable industrial plants using obsolete methods and equipments in a day in which successful existence is possible only through low production costs.

E. A. Steinbuehler of the Brooklyn Edison Co., Brooklyn, N. Y., points out the opportunities for the electrical industry in modernizing, electrically, these obsolete manufacturing plants. Among the various types of work needed in these industries, correct illumination is given as a prerequisite to any scheme of plant modernization. Errors by the workman can be eliminated to a considerable extent, thus reducing that important cost item in factory-spoilage.

The psychology of a well illuminated plant contrasted with a dark gloomy one is to put the workman in a much more cheerful state of mind. Well lighted plants assist in keeping down the number of avoidable accidents in shops.

A well-trained, capable engineer or an executive in charge of manufacturing is no warranty that either has ability to judge whether or not lighting in a factory is good. Such items as uniform distribution of illumination, absence of glare, adequate level of illumination are sufficiently important to require the advice of experts in determining the suitability of illumination in any factory.

With up-to-date control complicated systems of shafting and belting can be entirely eliminated. A motor may be equipped with automatic control on a machine requiring fine speed regulation.

Many sequence operations can be accomplished on automatic machinery if each process is accurately timed. Modern relays, supplied from an accurately regulated supply can time these operations to a fraction of a second if necessary.

Modern control has provided time-delay undervoltage devices for existing equipment at a cost which is negligible when compared to savings effected by its use.

Thermal overload relays permit a motor to be used to its full capacity but will promptly open the control circuit if the motor is subjected to sustained overloads.

Many minor operations, major ones as well, that now require the pulling of levers, the opening or closing of valves, the blowing of a whistle by steam or air, the opening of a door or a window, can very easily and inexpensively be done by a solenoid, electrically operated.

TODAY there is an unlimited field in industrial plants for electrifying such heating processes as metal melting, heat-treating, vitreous enameling, drying, compound melting, small unit applications, electrical welding, rivet heating and electrochemical and electro-metallurgical processes.

Material handling engineers in their studies of industrial plants, have arrived at the conclusion that from 50 to 75 per cent of all production costs are for handling material. In view of this, modern material handling devices are necessary in the factory to speed up production and lower handling costs by reducing the time required for transportation of raw materials and finished products from one department to another.

Electric cranes, industrial trucks, conveyor belts, gravity conveying tables, battery locomotives, and modern elevators offer a variety of useful applications to the modern factory.

Electrical Contracting, September, 1930

Modernization

An abstract of papers presented at the 30th Annual Convention of the Electra-gists by Louis Kalischer, chairman of the A. E. I. Motor Section and the New York Modernization Committee, and by E. A. Steinbuehler, manager, Commercial Engineering Bureau, Brooklyn Edison Co.

Modern motors have been developed to keep pace with modern machinery and tools which have gone to high speed. Up-to-date wood-working plants should replace old belt drives with high speed direct connected built-in motors. The new high speed metal alloys, especially for cutting, call for a new motor.

Direct connected motors or unit drives will save considerable space. New motors having higher efficiencies and better power factors also aid by allowing more load to be placed on existing wiring, and in cases synchronous motors will increase the overall power factor of the plant.

Often economies can be obtained by changing over direct current, 1 and 2-phase equipment in old plants to 3-phase. Old motors and those not functioning properly constitute dangerous fire hazards.

The application of standard and special signal apparatus to all kinds of establishments is unlimited. Electric signal apparatus provides the most reliable, most easily installed and speediest method of conveying information from one point to another, automatically or manually, known today. Many tasks now laborious, unreliable, depending on the human factor can be performed by electric signal apparatus.

Industry offers one of the largest fields for the application of blower equipment. A number of processes in industry are required by law to be ventilated. Good business requires it in hundreds of others.

The wiring in most industrial plants is pitifully inadequate. Electrical distribution systems in factories have grown up with sudden needs, little regard being given to

losses, voltage drop, economical use of copper, provisions for extensions or changes, shifting of machinery and availability for repair.

Poor line regulation, affecting lighting efficiency and motor speeds, inflexibility of control and interruptions due to overloaded circuits and the operation of protective equipment have seriously hampered the stability of production in many industrial plants.

In office buildings, electrical distribution can also frequently be improved. Vertical distribution through the application of multiple common risers in tall buildings should receive more widespread consideration due to its low initial cost and flexibility.

THE great developments of recent years are within the reach of all manufacturers and they should carefully consider all the economic possibilities available, because future businesses will endure only through modernization of equipment and scientific operation.

In New York the electrical industry has developed and is operating a modernization plan. In explaining this plan, Louis Kalischer, chairman of the New York Modernization Committee states that the object of this electrical modernization plan is to bring to the manufacturing plants in the New York area, the advantages of complete electrical modernization with a consequent reduction in their production costs.

The first thing done was to call together executives of the various electrical manufacturing interests—wholesalers, contractors and the utilities, who were invited to a luncheon where the plan was presented. There

(Continued on page 111)



1. B. M. Nilsen and C. E. Loomis, both of Akron; 2. Harry C. Evans, Columbus; 3. F. J. Schermerhorn, Milwaukee; 4. G. A. Reger, Altoona; 5. A. S. Morgan, Kansas City and A. Penn Denton, New York.

Electrical Contracting

With Which Is Incorporated The Electragist

S. B. WILLIAMS
Editor

The Electragist Convention

AFTER a large national convention certain thoughts came to one that represent a number of impressions. The Milwaukee Convention of Electragists held in August of this year was no exception.

First, comes the thought that the interest is growing. Generally, the last two sessions of these conventions are poorly attended, but this year the interest was unimpaired right up to the end.

The character of attending members has changed. The abandonment of the exhibits has, of course, had something to do with that because less room entertainment is now available. Also, the official chapter delegates are more interested. They want to take back home every idea, every thought they can.

And with this improved character of attendance, it would seem as though the program committee was charged with more responsibility than ever in making sure that those addressing the convention had a real message to deliver.

Each year the officers of the Electragist Association invite the presidents of the other national electrical associations to address the convention on some subject that is of mutual importance. Because of courtesy, they can't very well refuse, but we doubt very much if they are always enthusiastic about speaking. They almost always preface their remarks by saying that they cannot speak for their associations, and then go on to give their own personal views about something they know little about and admit their ignorance. So why invite them?

The Association of Electragists do not have to beg for recognition. It is a body of independent operators. If the manufacturers or the power companies have something they really want to say to the Electragists, they will seek the invitation.

Until such time it doesn't seem fair for men who have come hundreds of miles to learn of national policies to have their time taken up with personal opinions on very general topics.

Passing The Buck

THE theme of the address of Marshall Sampsell, a vice president of N.E.L.A., before the Electragist Convention was that the different factions in the industry should stop "passing the buck".

We heartily agree with the sentiment, and we would like to suggest that "ostrich hiding" is a form of buck-passing.

When a utility official takes the stand that an alleged practice on the part of utilities or their salesmen is probably true or at least exists in only a few places, because he, himself, doesn't know that it is happening, he is "ostrich hiding". Is it because he doesn't want to know that he is ignorant?

It is impossible for contractors or dealers to hold satisfactory grievance meetings with utility department heads because they are in no position to make a decision binding on the utility or its employees.

It is getting to be almost equally futile to take up such matters with company officials because they "ostrich hide". Is this passing the buck or isn't it?

In California, however, the buck has been passed once too often. For years the Southern California Electragists have worked with their power companies, have pleaded with their commercial heads, have had promises galore. Nevertheless, the bad conditions continued to grow worse.

On the other hand the Electragists of Southern California have had fine co-operation from the power board of the city of Los Angeles where there is municipal ownership.

Other dealers including the hardware and the furniture people are equally exhausted trying to co-operate with the utilities. At the same time the independent oil interests must dispose of their natural gas and the most logical outlet appears to be municipal power plants. In one city such a municipal plant is already assured.

Will the movement spread? If it does it will be because the power people continue to try to "kid" the contractors and other dealers. The contractors of Southern California are now "standing pat".

Passing the buck is a great game. It pretty generally is effective for awhile and sometimes works by tiring the other fellow out. Every now and then, however, the result is to make the other go further in retaliation than he wants to go.

We don't believe that contractors generally want public ownership but they can't be blamed for going to any limit after a barrage of buck passing.

Motor Sales Problems

MOTOR manufacturers by more efficient production methods have been able to effect economies in the factory, but the consumer has not been able to secure all of these benefits nor has the manufacturer himself been able greatly to profit, because the cost of distribution has risen.

Motors sold to other manufacturers for incorporation in their products and motors sold to large industrial plants that employ an organized electrical department are undoubtedly best sold direct by manufacturers' representatives.

On the other hand there are thousands of industrials which either have no electrical department, or, if they do, have a department that is competent only to handle motor maintenance. These industrials represent in the aggregate a very large motor market. The individual sales, however, are on the average too small to warrant direct selling.

Such orders are most economically handled through the motor specialists. They, however, can never feel that the business is worth-while developing intensively unless they receive the right co-operation from their respective motor manufacturers.

Agency agreements are worthless to the motor specialists unless the manufacturers leave this kind of business to their agents.

There is considerable dissatisfaction today on the part of motor specialists over the manner in which motors are being sold. These men for the most part are substantial industrial contractors who have the entree into thousands of industrial plants. Motor manufacturers with a straight forward business building policy will find in these specialists not only the finest kind of local representation but the opportunity to reduce distribution costs.

How Do You Vote?

LAST month we carried an article by J. Walter Collins suggesting that the term "housekeeping outlet" was not only more appropriate than "convenience outlet", but had a more effective selling value.

At the Milwaukee Electragist Convention this new idea was talked of considerably and it was suggested that a ballot be taken.

"Housekeeping outlet" carries the meaning that adequacy of outlets brings an easier job of housekeeping. It is the contention of those supporting the idea that the term "housekeeping outlet" would help materially to increase the number of outlets, not only in new homes, but in old homes as well.

We should be glad to hear from our readers on this subject. Are you in favor of the term "housekeeping outlet" or would you prefer the old term "convenience outlet"? Let us hear from you and let us have your reasons.

Specialists Are Busy

THE recent depression in business gave definite proof of the value of specialization by electrical contractors.

The only difference between these and normal times has been that in good times the specialist is busy with work that comes to him, while in these times he is busy with work that he goes out and sells.

A trip recently made through the corn belt where conditions should have been bad, if anywhere, revealed that every contracting specialist was busy. The only complaints came from those contractors who were in the competitive class.

Contractors wise specialize!

Code Chats

A Monthly Discussion of Wiring Practice and Questions of Interpretation, Presented with a View Toward Encouraging a Better Understanding of the National Electrical Code - - -

Conducted by F. N. M. SQUIRES

Assistant Chief Inspector, N. Y. Board of Fire Underwriters

Garage Rules for Gas Station Wiring

Some confusion has arisen over the manner of wiring gasoline service stations as coming under garage rules, while others believe they should receive the attention of Class 1, Hazardous Locations, of Article 32 of the Code. Still others treat them as outside work and let them get away with the proverbial murder. Fortunately, due probably to the almost perfect ventilation, few electrical fires have occurred in this class of risks. However, extreme care should be exercised, as when a fire does occur, it is apt to be a serious one.

Article 32, Class 1, Locations, include conditions where the explosive air mixtures may be found in any part of the premises while with gaso-

line stations we have the same conditions as encountered in garages, viz. —explosive atmospheres within a certain distance above the floor.

Therefore, it would seem proper to apply the garage rules as listed in Article 33, not forgetting that these rules are additional to or amendatory to those in Articles 1 and 19.

* * *

Stranded Wire in Conduit

It is possible to obtain on the market, No. 6 solid conductor single braid wire. In view of the paragraph following Table I of Section 503-q, is it permissible to install 6 No. 6 solid conductor double braid wires in $\frac{3}{4}$ in. conduit?

While No. 6 solid braid wire is made and is approved for use such as for open work, etc., it cannot be used in conduit. Rule 503-i requires that all wires larger than No. 8, be both stranded and double braided.

If we look a little carefully over the paragraph which follows the table mentioned above, we will note that the permission granted for exceptions to the table refer to single braided solid conductor wires only in the first sentence of the paragraph, and again in the last few words of the second sentence. The first part of the second sentence has no reference to solid or single braided wires and had the terms mentioned in the last part of the second sentence been intended to qualify the No. 6 wire, the word "wires" would not have appeared twice. Therefore the permission granted for installing 6 No. 6 wires in $\frac{3}{4}$ in. conduit refers only to approved conduit wire of that size, which is stranded conductor double braided wire, provided the conduit

run does not exceed 50 feet in length and does not contain more than two quarter-bends.

* * *

Grounding Conductors to Service Conduits

We notice that some contractors disregard Rule 907 (j) which specifies the size of conductor to be used for grounding service conduits. The table in connection with this paragraph shows the size of ground conductor which increases with the size of service conduit. We find that most contractors use No. 8 wire to ground service conduits irrespective of the conduit sizes.

Very often the contractor refers us to article 907 (h) which states that a grounding conductor for an alternating current circuit or system shall

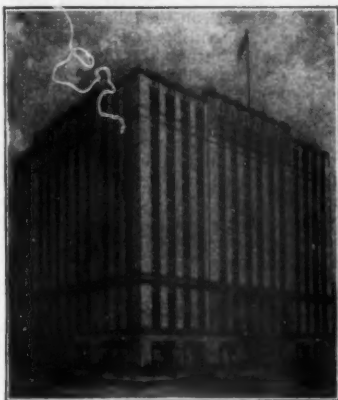


HAS DONE GOOD JOB FOR CINCINNATI CONTRACTORS:—Jos. M. McCarthy is manager of the Electrical Contractors' Association of Cincinnati, Ohio. Although he has been on the job less than a year, great progress has been made in co-operation, accounting, publicity, etc. The Cincinnati set-up attracted enough attention to draw a visiting delegation from Rochester, N. Y.



S.E.D. PRESENTS RESOLUTIONS TO EDISON:—C. L. Edgar, acting president of the Society for Electrical Development recently presented Thomas A. Edison with an engraved set of resolutions awarded by the Board of Directors of the Society as a testimonial of its esteem and appreciation.

Electrical Contracting, September, 1930



Hotel Paxton, Omaha, Nebr.
Architect—Jas. G. McArthur, Omaha.
General Contractor—Selden-Breck Const. Co., Omaha.
Electrical Contractor—Harry Binder.



New Faculty Building, Creighton University, Omaha.
Architect—Leo A. Daly, Omaha.
General Contractor—A. Borchman Sons, Omaha.
Electrical Contractor—H. W. Miller Electric Co., Omaha.



Barker Building, Omaha.
Architects—Allan & Wallace, Omaha.
General Contractor—Peter Kiewit & Sons, Omaha.
Electrical Contractor—H. C. Bennett Electric Co., Omaha.

*They Wanted the **FINEST** and Most Dependable
and So the Honors Went Unanimously to*

TRICO RENEWABLE FUSES

They're "Powder-Packed"

When electrical protection was considered for these three newest buildings in Omaha the choice naturally narrowed down to the finest and most dependable—TRICO Renewable Fuses. The logical reason for the excellency of TRICO performance is in TRICO construction—the powder-packed element; the short fusible strip making a short resistance path; the copper leads—all of which are conducive to time lag and reduced watt loss.

Money-Saving Factors

No Premature Blowings
No Unnecessary Shutdowns
No Oxidized Contacts
No Charred Casings
Copper-to-Copper Contacts
Reduced Watt Loss
Time Lag

To secure these money-saving factors the TRICO renewal element is designed with the thought of performance in mind rather than interchangeability of links; and the practical buyer prefers performance.

And they cost
no more
than other makes
of renewable fuses.



Approved by
Underwriters

NEW!

Another
Outstanding
TRICO Product

KLIPLOK

Clamp for
Fuse Clips



"Locks Like
a Vise"

Makes pressure contact between fuse and clips. Reduces resistance and preserves clips and fuses. Made in sizes to fit all clips.

TRICO FUSE MFG. CO., 1007 McKinley Ave., Milwaukee, Wis.

TRICO
REG. U. S. PAT. OFF.

RENEWABLE FUSES—PLUG FUSES—NON-RENEWABLE FUSES—FUSE PULLERS

have a current carrying capacity not less than one-fifth that of the conductor to which it is attached and in no case shall the grounding conductor be smaller than No. 8. This article refers to the grounding conductor used to ground the *grounded wire of a system or circuit*, and not to the grounding conductor used to ground service conduits.

Rule 907 (j).

"The size of the wire or pipe used for grounding the service conduit shall be not less than that given in the following table:

Nominal Size of Conduit	Grounding Conductor If Wire, No.	If Pipe, Size
Service		
3/4-1	8 gauge	1/2-inch
1 1/4-1 1/2	6	1/2-inch
2	4	3/4-inch
2 1/2	2	3/4-inch
3	0	1-inch
3 1/2-4	00	1-inch
above 4	000	1-inch

C. V. PORBES.

* * *

Secondary Protection

INTERPRETATION 34

QUESTION: Where a 3-phase, 2300-volt service is stepped down to 220 volts and current supplied to one set of 3-phase, 220-volt feeders, and one set of single-phase 110-220-volt, 3-wire feeders, does paragraph g of Section 5009 permit omission of switches and fuses in the secondary feeders if proper protection has been provided on the primary side of the transformers?

FINDING: No. Paragraph g requires secondary protection in this case.

* * *

Separation of Driven Grounds

INTERPRETATION 35

QUESTION: How far apart must driven electrodes be in complying with paragraph d of Section 904?

FINDING: A specific requirement is not expressed, but reference is appropriately made to the 6-foot separation mentioned in paragraph e of Section 902.

* * *

One Piece Electrodes

INTERPRETATION 36

QUESTION: What is meant in paragraph d of Section 901 by "when of less than standard commercial length shall preferably be of one piece"?

FINDING: This text recommends against the use of an electrode built up of short lengths of pipe or rod coupled together in any appropriate manner.

* * *

Switch Blades Optional

INTERPRETATION 37

QUESTION: Should the switch called for in paragraph k of Section 405 be two- or three-pole, as the case may be, according to paragraph c of Section 405, if one wire is grounded?

FINDING: Article 4, including Section 405, governs only service entrance equipment. The question does not apply to service entrance conditions. Accordingly, reference should be made to paragraph c of Section 1204, which section requires a switch blade in each ungrounded conductor, but makes it optional as to whether a switch blade be inserted in a grounded conductor.

* * *

Grounding Disconnectors

INTERPRETATION 38

With respect to means for grounding on the load side of air-break disconnectors as required in paragraph h of Section 5009.

QUESTION: Is it required that the current-carrying parts on the load side of the disconnector be grounded when the switch is in the open position?

FINDING: Since the National Electrical Code is primarily an installation code, rather than an operating code, it has required in this paragraph the provision of means to facilitate grounding, but does not specify when the grounding shall be done.

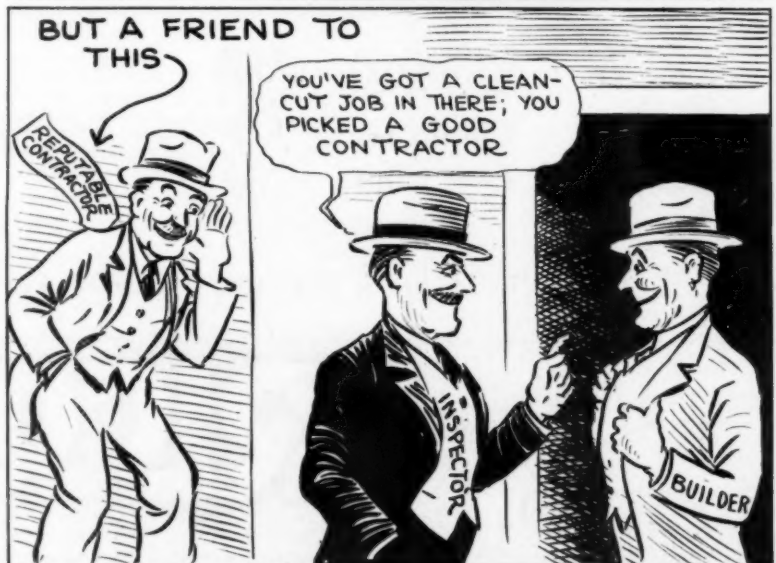
QUESTION: Must this grounding device be incorporated in the disconnector and made a part of same as furnished by the manufacturer?

FINDING: The Code does not specify who shall furnish the necessary equipment, nor whether it shall be assembled at the factory or on the job.

QUESTION: May a grounded flexible conductor be provided to be wrapped around all current-carrying parts on the load side of the disconnector when the switch is open in order to satisfy this requirement?

FINDING: Yes.

The Contractor's Friend



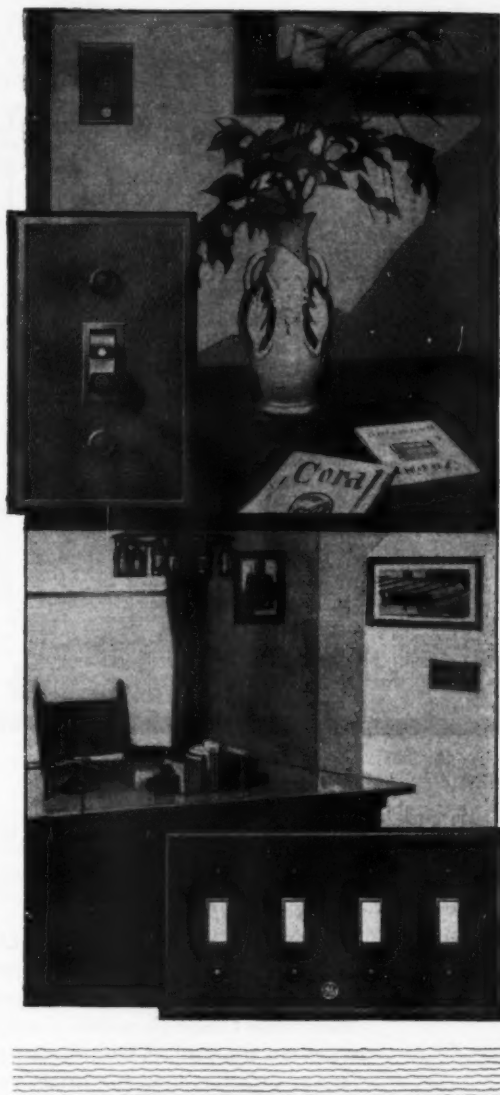
Textolite

gives your work
refinement

THE satin beauty of Textolite flush plates helps to lend handsome distinction to wiring you install in homes or offices. And the attractive shade of brown, in which these plates are finished, blends harmoniously into any decorative scheme.

Textolite—this General Electric phenolic compound—is more than merely decorative. It is tough, light, hard and satisfactory to install. It's washable and hard to break.

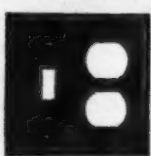
General Electric offers you a complete line of Textolite Moulded Wiring Devices. Write for descriptive matter to Section D-299, Merchandise Department, General Electric Company, Bridgeport, Connecticut.



A Few Plates of The Textolite Line



For Two Flush Tumbler
Switches



For Switch and Double
Convenience Outlet



For Switch and
Bull's-eye

GENERAL  **ELECTRIC** 

TEXTOLITE WIRING DEVICES
ELEMENTS OF THE G-E WIRING SYSTEM

MERCHANDISE DEPARTMENT • GENERAL ELECTRIC COMPANY • BRIDGEPORT, CONNECTICUT

*They're Selling
G-E
WIRING SYSTEM
with Profit...*

CONTRACTORS are making money by selling the General Electric Wiring System. Our recent contractors' contest brought us their selling ideas from everywhere.

They get G-E Wiring Systems into model homes
... they advertise every big wiring job, mentioning architects and builders prominently
... they "select good electricians and train them to sell on the job"... they draw up home electrical specifications for lumber companies ... they use ideas in plenty.

Such ideas as these bring *more* business because the General Electric Wiring System is backed by powerful national advertising. It reaches home-owners, builders and architects ... *your* own customers.

This great advertising campaign supported by folders, booklets, newspaper mats and other business-getters that General Electric furnishes can win contracts for you too.

Capitalize on it. Sell the General Electric Wiring System ... for new buildings or old ... cottage or skyscraper.

GENERAL  ELECTRIC 
WIRING SYSTEM

MERCHANDISE DEPARTMENT

GENERAL ELECTRIC COMPANY

BRIDGEPORT, CONNECTICUT

Contracting News

Information of Interest to Electrical Contractors consisting of items of news, short articles, practical ideas, etc. Our readers are invited to contribute to this department.

Better Business in Massachusetts

The Massachusetts Department of Labor and Industries has released figures obtained from nearly 400 contractors showing that the number of men employed in June increased 12.5 per cent over May. The number of man-hours increased 13.16 per cent and the amount paid in wages 14.1 per cent.

* * *

New York State Makes Membership Drive

The New York State Association of Electrical Contractors and Dealers is making an effort to include in its membership list every legitimate contractor in the state. After January 1, 1931, the dues will be \$5.00 per year.

A membership committee has been appointed which includes the following: Richard Wahle, Buffalo, chair-

man; G. Fred Laube, Herbert F. Janick, F. A. Mott, Rochester; L. W. Kiesewetter, B. H. Garrett, Syracuse; A. J. Symbolie, Granville; E. C. Brown, Jr., Rockville Centre; John Wilhelm, Brooklyn; E. A. Jones, Fred Neuman, Albany; George H. McKee, Mount Vernon; W. H. Williams, Utica; P. A. Hilbert, Binghamton; C. D. Stempfle, Elmira; Richard Spengler, Schenectady; D. A. Humphrey, Rome; G. F. Heustis, Earl H. Stickney, Glens Falls.

* * *

San Francisco Chapter Elects Officers

The newly reorganized San Francisco Electragists at their meeting early in August elected permanent officers for the ensuing year. Tom Harris, of the H. S. Tittle Co., was elected president. Al Drendell, of the Decker Electrical Construction Company, was elected vice-president. On the executive committee were named Fred Minkle, of Minkle & Lucas; Charles Schmitt, of the Superior Electric Company, and Clyde Chamblin of the California Electrical Construction Company.

* * *

New Red Seal Booklet

"All the Comforts of Home," is the title of the new booklet supplied by the Wiring Promotion Division of the Society for Electrical Development. A graphic story is told of the utilization of electricity in the home and the necessity for adequate wiring.

The material is applicable to the old home as well as to new construction. It stresses no particular products but sells the general idea of comfort and convenience through the use of electricity. Leagues have wanted to develop material of this kind for some time and contractors use them in selling jobs to home owners.

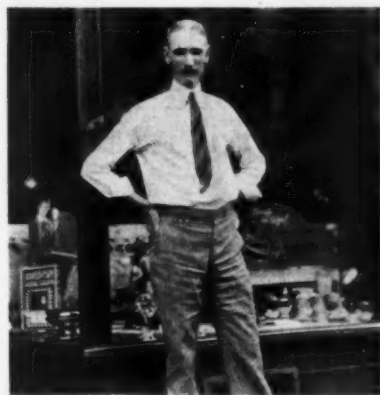
Chicago Changes Code

The City Council of Chicago, Ill., has recently approved numerous changes in the Chicago Electric Code. The new rules require that all wires larger than No. 10 shall have lugs and No. 8 wire in place of No. 10 is required for services. Additional convenience circuits and outlets are required and lights must be provided in accessible attics and clothes closets.

Among the other changes are the following: Four meter fitting type service switches permitted; ten wires allowed in metal raceway; approved non-metallic bushing required; varnished cambric cable smaller than No. 6 only to be used by special permission; size of feeders are given for apartment buildings and stores; rigid conduit in elevator hoistways; length of cords on appliances is limited; requires 1½ in. depth outlet box, plates not permitted; provides for the grounding of portable equipment in industrial establishments; double locknuts on grounding conduit; requires 24 in. space between the wall



HEADS MANHATTAN REMOTORIZATION COMMITTEE:—L. C. MacNutt, president of MacNutt, Watts & Tankard, one of New York's prominent industrial contracting specialists, is chairman of the Manhattan committee for Electrical Modernization of Industries.



IDENTIFIED WITH INDUSTRY 29 YEARS:—W. W. Clatterbuck, Council Bluffs, Iowa, broke into the electrical contracting game in 1901, with the Wolfe-Lovett Electric Co. Several years later he bought out the firm and has carried on ever since, developing a well-balanced wiring and merchandising business.



In Denver

These Jobbers will supply you with STEEL CITY products

B & R Electrical Supply Co.
Central Electric Co.
Elliott Schmidt Electric
Supply Co.
Graybar Electric Co.
Hendrie & Bolthoff Mfg. &
Supply Co.

Mine and Smelter Supply Co.
New England Electric Co.
Poindexter Electric Co.
B. K. Sweeney Electrical Co.
B. C. Watts & Co.

(Denver Territory Represent-
ative, Fred E. Staible, Inc.,
2356 Blake St., Denver, Colo.)

Service x-it

No. 494

for

—SHOW WINDOWS
—SHOW CASES
—BASE BOARDS
—MANTLES, etc.

Last word in
convenience
outlets

Standard package of 50. . . .
List price 70c each. . . . Only
three parts—the cover plate—
the receptacle—and the box
body. . . . The box is equipped
with a cord grip device which
will not come loose. . . . The
new X-IT is the smallest, neatest
and simplest of any Floor Box
Line.



Adopt X-IT Convenience
Outlets as standard—fastest
and easiest to install, saving
you money.



STEEL CITY

ELECTRIC COMPANY

Pittsburgh . . . Penna.

and apparatus on the rear of switch-boards; combination gas and electric fixtures not to be installed; prohibits use of Edison base type receptacles for attachment plugs; requires gas filled lamps in show windows to be equipped with shades or guards; requires use of pilot lights on all heating appliances used for industrial purposes; a new section governing elevator motors and control apparatus; new section on hazardous locations; requires elevator motors and control apparatus where arcing parts are not enclosed, to be installed in a fireproof room; requires grounding of frames and equipment in garages; requires exhaust fan in moving picture booths to be on emergency circuits; changes in electric sign rules; branch fuses in signs and outline lighting limited to 15 amp.; extensive changes in theatre wiring rules; requires stage borders to be suspended by wire rope and to be grounded; electric exit lighting system in lieu of gas; permits high tension cables for inside gas tube signs to run open under certain conditions; 3 in. door sill in transformer vaults instead of 6 in.; commercial street lighting revised; new section covering outdoor lighting on private property, and extensive changes in festoon lighting.

* * *

Youngstown Changes Red Seal Requirements

The Electrical League of Youngstown, Ohio, has changed its Red Seal requirements, specifying only one convenience outlet in the laundry



WIRED WASHINGTON'S HOME:

—Stanley Cameron, left, and Nick Brewer of the H. P. Foley Company, Philadelphia, which wired Washington's home at Mount Vernon, now a national shrine.



VOLUME PRODUCTION-NOW AND THEN

WHEN the historic old "smithy" was pretty much the centre of a community's mechanical activities, the output wasn't thought of as quantity production. Yet it undoubtedly was—in terms of community requirements.

Progress, however, in terms of enormously broadened transportation, communication and educational facilities, has made the individual community adjacent to the whole country. In that sense, the sum of the requirements of all the individual communities has become a unit requirement of the nation—

to be served by large manufacturing operations based on standard production in great volume.

And so the "smithy" has given way, by gradual steps in development, to the scientific plants that we know today—fitted with modern mechanical and electrical equipment which make for speed, volume, accuracy and safety.

And wherever electrical development has been concerned with this development, Bryant has had a part—in its creation of "Superior Wiring Devices."



No. 4106
Aluminum
Socket



No. DL 270
"Diple"
Thru-Hook
Connector

THE BRYANT ELECTRIC COMPANY^{E-7}

BRIDGEPORT
BOSTON • CHICAGO • NEW YORK

140 Federal Street 844 West Adams Street 60 East 42nd Street



CONNECTICUT, U.S.A.
PHILADELPHIA • SAN FRANCISCO

Widener Building

149 New Montgomery Street

MANUFACTURERS OF "SUPERIOR WIRING DEVICES" SINCE 1888—MANUFACTURERS OF HEMCO PRODUCTS

Fretz-Moon



Notice—The Threads Are Perfect!

The threads on Fretz-Moon Conduit are always sharp, clean and accurate. Careful inspection before shipment insures uniformity. Contractors that use Fretz-Moon Conduit know that perfect threads mean quicker easier work—and a saving of time and money and worry. Stock Fretz-Moon Conduit.

Fretz-Moon Tube Company, Inc.
Butler, Pa.

RIGID CONDUIT



HEADS BURLINGTON ELECTRA-GISTS:—M. J. Frazier, Burlington, Iowa, electragist, was very active in the recent formation of the Burlington Chapter, although he insists on giving plenty of credit to the other local men. He is president and Leo Pohren is secretary. Incidentally he designed and built this slip-on truck body for one of his cars.

instead of two. The two outlets were formerly required to provide for an ironer. It was found that from 75 to 95 per cent of the ironers are not used in the basement, therefore, the second convenience outlet in the laundry seemed superfluous.

Circuits of No. 12 wire were discontinued. In most new houses and in practically all Red Seal homes, the fuse center is installed on the first floor resulting in short run circuits so that circuits of No. 14 wire are believed to be of sufficient capacity for all appliances.

* * *

Kelly Directs Research for Electrical Guild

John A. Kelly, well known for his work on the electrical installations of some of the country's largest buildings, has recently been appointed director of the Research Bureau of the Electrical Guild of North America, Washington, D. C.

The Electrical Guild was recently organized by a number of representative electrical contractors throughout the country who operate union shops.

Mr. Kelly is giving special attention to the securing, analyzing, and tabulating of information relating to matters of labor costs and production methods, and to the type and

UNION

RENEWABLE

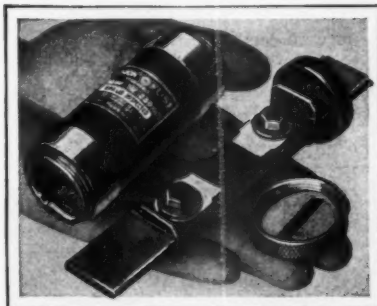
FUSES

New Handy Fuse Wrench



The handiest tool for tightening and loosening ferrule type renewable fuse caps. Comfortably-sized hard wood handle, with hole in each end—one for fuses of 1 to 30 amp., 250 volt size; the other for 31 to 60 amp., 250 volt, and 1 to 30 amp., 600 volt. Your wholesaler has it.

The Knife-Blade Type Is Just as Simple



When a knife-blade type Union Renewable Fuse blows, you need only remove one end cap to renew the link. The other cap remains on the knife-blade. The fusible link is notched at both ends to permit slipping into or out of place, when studs are only slightly loosened. Less time is required for renewals. The rugged extraheavy casing, and an exclusive method of venting through the fibre, insure long fuse life.



WHAT COULD BE SIMPLER?

The simpler the design of the fuse and the fewer parts, the easier it is to renew—the quicker you can get idle machinery into operation again when a fuse blows. The illustrations at the left show you the simplicity and few parts of the new ferrule type Union Renewable Fuse. There are but three parts besides the renewal link.

When the fuse blows, you simply unscrew the end caps and pull out the link. You don't have to worry about any washers or end plugs dropping out when you unscrew the caps, as this fuse has no washers to drop or lose. The end caps are one piece! Contact with the fuse clips is positive.

After replacing the link you screw on the caps—and the fuse is ready for service. What could be simpler? The renewal links are supplied bent at one end, automatically adjusting the length and assuring perfect fit.

One of the reasons for the long life of this new ferrule type renewable Union Fuse—why it will withstand blowout after blowout—is because it is vented through the end caps—not the threads. Just blow a mouthful of smoke into the small hole in either one of the end caps and watch it come out of the other end! That's how the "blowing" pressure is relieved to prevent molten metal from sealing the caps.

Another reason for long life and lower yearly fuse costs is that the renewal link is held diagonally in the heavy horn fibre casing . . . cannot be put in any other way . . . an exclusive advantage. It cannot twist when being installed. It cannot touch or char the fibre or interfere with the accuracy of the rating. Try these new time and money-saving fuses on your most troublesome circuits. Order from your wholesaler.

JEFFERSON

ELECTRIC COMPANY

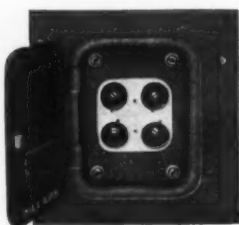
1503 S. Laflin Street:

Chicago, Ill.

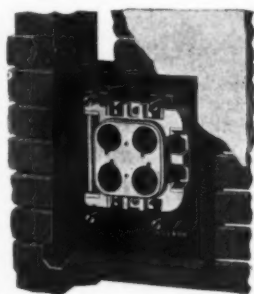
(A-1018)

KILLARK RESIDENCE PANELS

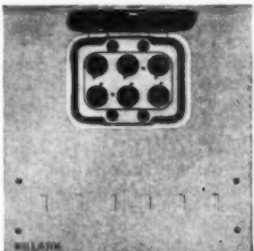
Bring a new standard of service to the user and convenience to the contractor



Four circuit, flush type Killark Residence Panel. Notice the screws which hold the trim are not visible when the door is closed.

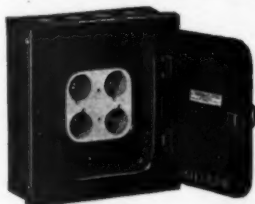


Showing method of attaching Killark Residence Panels to the studding. Notice how cut lathing is supported in a channel slot and how plaster ground is fixed automatically. No bridging is required.



The Killark switch-type residence panel for use where it is necessary to have a separate switch for each circuit. These panels are furnished in the flush type only.

Here is the residence panel the contractor has been looking for. It has been designed by a contractor of eighteen years experience, and made expressly to take the trouble out of residence panel installations. Note these features: A mounting bracket that nails directly to the studding, automatically plumbing the panel and the correct plaster ground. A lath support which firmly holds the unsupported end of the lathing and a balancing and adjusting device that permits quick adjustment of the block to meet any irregularities of the finished plaster.



The Killark surface-type residence panel for use on unplastered walls and on the plastered walls of finished buildings. This cut shows a four circuit panel, finished in black enamel.

Flush & Surface Types; Interchangeable Blocks

No bridging is required in installing Killark Residence Panels. The slotted groove on the right hand side forms a support for the cut lathing and the upper and lower ends of this groove hook over the top and bottom lath. The trim is attached by specially designed adjustable screws that are not visible when the door is closed. The blocks are built for 2 or 3 wire main service, and either single or double fusing. In flush type cabinets, which come in three sizes, the blocks are interchangeable to accommodate fuses as follows: 2 and 4, 6 and 8, 10 and 12. The finish is metallic grey lacquer. Write for price sheets and details.

Killark Electric Manufacturing Co.
3940 Easton Ave. • • • St. Louis, Mo.

quality of materials and equipment best adapted for use in the construction field. This information is to be made available to electrical contractors, the electrical manufacturers and to the public.

Coming up through the ranks, Mr. Kelly has had a broad experience in the electrical construction industry. Upon leaving school, he secured valuable and intimate knowledge of construction work while employed as an apprentice and journeyman electrician. In 1910 he became superintendent and estimator for the Martin Company, Cleveland, Ohio, and in 1918, engineer and later vice president of the Dingle-Clark Company, also of Cleveland.

In 1925 he became Cleveland manager for J. Livingston & Company, later being transferred to Chicago, where he had charge of the installation of the electrical work in the Stevens Hotel, on the completion of which project he represented the same Company in Detroit during the construction of the Fisher Building.

The latest work of which he was in charge was the electrical installation in the recently completed Merchandise Mart, in Chicago (described in the July issue of *ELECTRICAL CONTRACTING*), this being recognized as the largest building in the world.

Mr. Kelly is a member of the American Institute of Electrical Engineers, and for some years served as a contractor-representative on the Council of Industrial Relations for the Electrical Construction Industry.



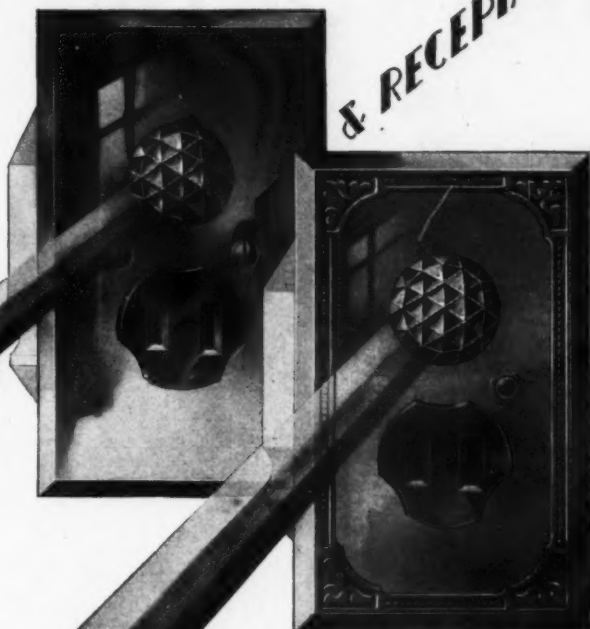
CONTRACTOR FOR QUARTER CENTURY:—Edgar Rice, head of the Electrical Construction and Supply Co., Alton, Ill., started in business for himself in 1904, right at his present location, 207 East Broadway. His electrical experience dates back to 1891, when he went to work for the power company in Alton. His work is chiefly commercial wiring at present.

H & H

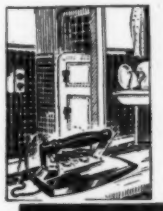
NO. 7711
COMBINATION

WARNING LIGHT

& RECEPTACLE



Flash the Story of Careful Wiring



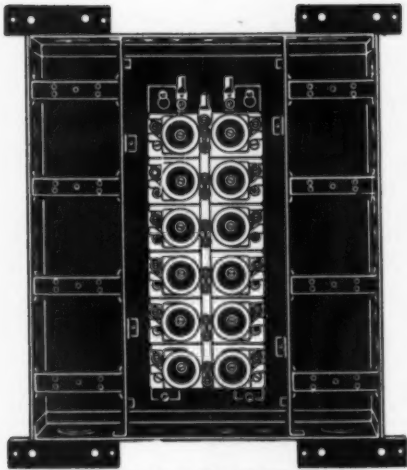
Here, you can point to a SAFETY feature in your wiring of houses and apartments. Warning Light shows RED when current is ON in Receptacle. Which shows the owner you've taken precaution to safeguard the home against over-heating of heating appliances . . . In kitchens, laundries, dining rooms, bedrooms, H & H "7711" warns against negligence with electric flatirons, cookers, toasters, heating pads, curling irons &c. . . . With safety you have STYLE in this new device. Brass plate, or molded brown "HEGEMITE" with ribbed surface and art border. Bullseye FLUSH with plate; no projection. Neatly designed to attract attention to a wiring safeguard which deserves it! Catalog "U" gives specifications on this and many other NEW wiring-device developments. Your guide to the very latest; have you it handy? If not, ASK for copy. ♦ ♦

HART & HEGEMAN DIVISION

THE ARROW-HART & HEGEMAN ELECTRIC CO.

HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890

WADSWORTH



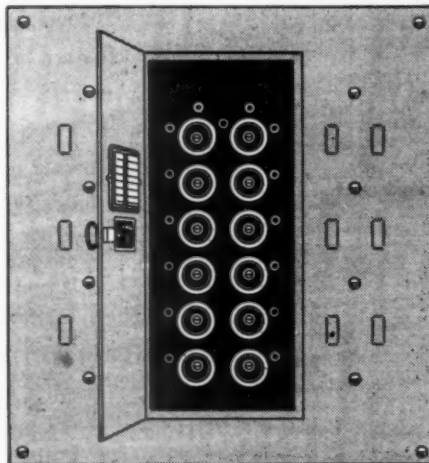
Catalog No. 12 FT
Cabinet Without Dead Front and Trim

Flush type cabinets for toggle switches

Have many distinctive features that make installation work easy and a good job.

Designed for quick, easy and economical installation.

If you are not familiar with the real superior merit of Wadsworth Safety Switches give them a trial and convince yourself.



Catalog No. 12 FT
Cabinet with Dead Front and Aluminized Trim in Place

The WADSWORTH ELECTRIC MFG CO. INC.
Corington, Kentucky.



OFFERED JOB IN CHINA:—I. H. Dicker of Brooklyn did such a satisfactory job in wiring a movie studio for a Chinese concern that they wanted him to make installations in the Orient. Mr. Dicker has a recommendation written in Chinese by the customers. We couldn't read it but it looked very convincing.

Results of Modernization Plan

The New York Electrical Association reports that the organized canvass of factories under the Modernization Plan has resulted in opportunities to study the possibilities of modernizing some 500 plants. From these surveys over 50 contracts have been secured.

* * *

Southern Inspectors Announce Program

A tentative program for the second annual convention of the International Association of Electrical Inspectors, Southern Section, at Jacksonville, Fla., September 8, 9, 10, has been completed.

Among the many speakers on the program are: A. Penn Denton, who will speak on "Does the Code Affect Adequate Wiring," and J. C. Forsyth, who will talk on "New Developments." A. R. Small will speak on "National Fire Protection Association's Electrical Committee." Dana Pierce will give a talk on the "Underwriter's Laboratories."

Other speakers included are: Charles W. Abbott; George P. Allen; Ernest E. Anders; I. A. Bennett; W. R. Bullard; William S. Boyd;

(Continued on page 85)



50% EASIER PULLING

CIRCUIT TESTING
IN ONE THIRD
THE TIME

We'll gladly serve you
through your jobber



United States Rubber Company
1790 BROADWAY - NEW YORK
Branches in Every Industrial Center

"U.S." RAINBOW WIRES

BE SAFE • BE MODERN • WITH SQUARE D



In the background is a 30-60-100-amp. Enclosed Safety Distribution Panel with four switches open. A close-up of one section, with blades in the "on" position is also shown. In the foreground is a 200-400 amp. Panel with two switches open.

Introducing . . .
the NEW Square D Enclosed
Safety Distribution Panel . . .

Not only Dead-Front . . . but Safe All Around . . . and Safe to Operate

Greatest of the features of this NEW Square D product for the distribution of power and lighting is its COMPLETE SAFETY. It is safe to open under full load . . . and safe when it is open. It is totally enclosed . . . dead-front . . . and completely protected at all other points. No live parts can possibly be touched. Opening any unit of these Distribution Panels instantly disconnects ALL live parts, although leaving the fuses accessible upon their base. Opening of circuits involves no hazard to equipment or the operator. These panels also provide maximum con-

venience. Made up of circuit units mounted upon channels in standard cabinets . . . with busses mounted in isolated compartments in the rear of the units. Units of all sizes are interchangeable in all cabinets and with all busses. Let us tell you how these NEW Enclosed Safety Distribution Panels can help you.

SQUARE D COMPANY, DETROIT, U. S. A.

Factories at: Detroit, Mich., Peru, Ind., and Milwaukee, Wis.
SQUARE D COMPANY, CANADA, LTD., WALKERVILLE, ONTARIO
BRANCH OFFICES: Toronto, Montreal

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SQUARE D

DISTRIBUTION



PANELS

OFFICES

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Milwaukee	San Francisco
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The SQUARE D Line is COMPLETE and Thoroughly DEPENDABLE

Switch and Panelboard Division, Detroit

Industrial Safety Switches
Meter Service Switches
SQUARE-Duct (the rigid suspension method for wiring)
Panelboards for Both Lighting and Power
Fuse Cabinets

Outdoor Meter Boxes
Voltage Testers
Meter Service Breakers

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Compensators
Magnetic Contactors

Resistors
Pressure Switches
Vacuum Switches
Float Switches

Specialty Division, Peru, Indiana

Special Electrical Devices
Special Porcelain Products
Porcelain Insulators

(182)

Suggested RESALE PRICES *for* Wiring Supplies

The prices listed on the following pages are merely suggested resale prices for the commonly used standard supplies and equipment employed in electrical construction work. They are based on average current trade costs throughout the country, very largely obtained from jobbers' price sheets, and are also based on average overhead charges.

* * *

Obviously, prices can be suggested only for the widely used products that are nationally distributed, and under no circumstances is this section intended to function as a directory of products or manufacturers.

* * *

The publishers wish to again emphasize that these are merely *suggested* resale prices and while every effort is made to make them universally applicable and accurate we cannot guarantee them or assume any responsibility for errors.

* * *

The prices appearing in this section will be completely revised each month as trade prices may change.

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Suggested Resale Prices for Wiring Supplies

These are merely suggested resale prices for the commonly used products that appear regularly on jobber price lists. They are figured on generally accepted principles for computing resale prices and should cover average conditions but are not guaranteed. (See note on title page.)

A-SUNDRIES

ASBESTOS

ASBESTOS
Asbestos Millboard—Per Pound—30c.

ANNUNCIATORS

House Type

	Edwards Dixie		Edw. & Faraday		"P & W"	"P & W"
Number Drops	Ansonia	No. 81 or Faraday No. 373	White Enamel	Competition Automatic		
2	.....	\$ 9.85	\$13.00	.....	.....
3	\$ 9.90	11.60	14.80	.....	.....
4	10.75	13.05	16.40	\$13.25	\$16.50	
6	14.85	19.40	19.40	.....	.....
8	16.50	19.40	22.75	19.80	24.75	
10	19.00	22.75	26.00	23.00	29.70	
12	22.25	25.90	29.15	26.40	.....
14	24.75	.....	.....	.....	.....
16	27.25	.....	40.00	34.65	.....
Ex. Drops	.....	2.25	3.00	.....	.....
	(All other Annunciators—Sell at List less 10%)					

COUCH

Electrical Reset

Style D		Style F Flush		Style F Flush	
Face Type		Wood Face		Metal Face	
Number	Price	Number	Price	Number	Price
4	DA 4 \$21.50	FA 4	\$44.80	FA 4	\$49.80
6	DA 6 26.80	FA 6	49.30	FA 6	55.00
8	DA 8 31.60	FA 8	53.80	FA 8	59.70
10	DA 10 36.50	FA 10	58.25	FA 10	64.70
12	DA 12 43.10	FA 12	64.25	FA 12	71.30
15	DA 15	FA 15	73.10	FA 15	81.50
16	DA 16 56.50	.....	.....	.....	.....
20	DA 20 69.75	FA 20	88.15	FA 20	98.00

Add for each drop on any of above—\$4.15 per drop

ADAPTORS & REDUCERS

ADAPTORS & REDUCERS For Sockets and Vases

	Arrow	Benj. Bryant	G. E.	Hubbl.	Price	
Mogul to Medium.....	292	98	421	070	\$0.50	
Medium to Candelabra.....	392		392	35699	.25	
Candelabra to Miniature.....	392				.25	
Medium to Intermediate.....	492		9091	2644	492	.25
Parallel Blades to Medium.....		1006	KF	682	5424	.30
Plug in Full Socket.....	35024		35024	35024	1.90	
Benjamin Vase Adapters No. 831, 832, 833—Each.....					2.00	

SOCKET EXTENSIONS

Benjamin No. 91 Socket Extension—Ea. \$.45

ATTACHMENTS FOR PULL SOCKETS

For 8" to 14" Reflectors No. 5828-5829-5957-5958.....	\$.55
For 16" to 20" Reflectors No. 5953-5954-5959-5960.....	.65

ADJUSTERS

ADJUSTERS For Cords

	For Cords	Price
Universal Cord Adjuster	Standard No. 1417 3/4" Long.....	\$.10
" " "	Factory No. 1418 5/8" Long.....	.20
" " "	Reinforced No. 1419 5/8" Long.....	.22
Ball Type No. 1403 & 5	for Type C Cord. 3/4 hole.....	.10
No. 4634 & 5	for Reinforced Cord. 3/4 hole.....	.12

ACORNS & TASSELS

Luminous Acorns and Pendants for Pull Chain.....	\$0.30
Brass Acorns and Tassels for Pull Chain.....	.10
Brass Acorns Adjustable for Linen Cord.....	.10

BOXES, SWITCH

STANDARD SWITCH BOXES

			Price	
	Depth		Black	Galvd.
For Loom	2, 2 1/2 or 2 3/4"	Without clamps	\$.16	\$.21
		With "	.18	.22
For Metallic Cable	2, 2 1/2 or 2 3/4"	With "	.16	.21
		Without "	.12	.16
For Rigid Conduit	1 1/2 to 2 1/2"	Without "	.21	.26
	3 & 3 1/2"	Without "	.32	.36
Spacers—For Spacer only deduct from any of above prices....			.04	.05

With BRACKETS or EXTENDED EARS or LATH SUPPORTS

	Depth		Price	
			Black	Galvd.
For Loom.....	2, 2 1/4 or 2 1/2"	Without clamps	\$.20	\$.24
" ".....	2, 2 1/4 or 2 1/2"	With " "	.22	.26
For Metallic Cable or Loom...	2, 2 1/4 or 2 1/2"	With " "	.28	.33
" Rigid Conduit.....	2 to 2 1/2"	Without " "	.35	.30

SECTIONAL BOXES

	Boxes		Spacers	
	Black	Galvd.	Black	Galvd.
For Loom or Romex.....2-2 3/4" Deep	\$0.20	\$0.22	\$0.04	\$0.05
* Rigid or Flex Conduit.....2 & 2 1/2" *	.22	.24	.05	.06
* Flex. Met. Conduit Only...2"	.25	.27	.05	.06

SOLID GANG BOXES—GALVANIZED

	Covers Extra						
	2 Gang	3 Gang	4 Gang	5 Gang	6 Gang	7 Gang	8 Gang
Price of Box...	\$.85	\$1.25	\$1.65	\$2.20	\$4.25	\$6.45	\$6.80
Price of Cover...	.42	.62	.85	1.05	2.00	3.55	3.95

TANDEM SWITCH BOXES

		Black			Galvanized		
Loom, BX or Conduit		2 Gang	3 Gang	4 Gang	2 Gang	3 Gang	4 Gang
Tandem Boxes 1½ & 2" Deep		\$.65	\$1.10	\$1.65	\$.81	\$1.25	\$1.90
" " 2½ & 2¾ " "		.81	1.23	1.90	.95	1.37	2.18

DOOR SWITCH BOXES

For Rigid or Flexible Conduit without Clamps.....	Black	Galvd.
“ “ “ “ “ with Clamps.....	\$.50	\$.55
	.55	.65

LAUNDRY BOXES

Gem-Appleton or Raco, etc., with Single Receptacle.....	Black \$1.10	Galvd. \$1.25
Duplex.....	1.25	1.35

For Concrete Boxes See Page PL-5.
For Solid Gang Boxes See Page PL-5.

BOXES & COVERS, OUTLET

CEILING BOXES, ROUND

Univer- sal	No.	Size and Description	Depth	Knockouts Bottom Side	Price Black Galv.
	36115	3 1/2" With Lugs	3/4"	3-1/2" & 4 Loom	\$0.12 \$0.13
	36116	3 1/2" No	3/4"	3-1/2" & 4	.10 .12
	36125	3 1/2" With "	3/4"	3-1/2" & 4	.14 .16
	36126	3 1/2" No	3/4"	3-1/2" & 4	.12 .14
	36716	3 1/2" Flat Plate with Clamps	3/4"	3-1/2" & 4	.09 .11
	56111	4" With Ears	3/4"	5-1/2" or 3/4" K.O.	.10 .12
	56112	4" No	3/4"	5-1/2" or 3/4" K.O.	.09 .11
	56115	4" With Ears-Loom & Cond.	3/4"	5-1/2" & 6 Loom	.11 .14
	56116	4" No	3/4"	5-1/2" & 6	.09 .10
	56121	4" With Ears	3/4"	5-1/2" or 3/4" K.O.	.14 .16
	56122	4" No Ears	3/4"	5-1/2" or 3/4" K.O.	.10 .12
	56125	4" Ears-Loom & Conduit	3/4"	5-1/2" & 6 Loom	.16 .19
	56126	4" No Ears	3/4"	5-1/2" & 6	.14 .16
	56712	4" Flat Plate	3/4"	5-1/2" or 3/4" K.O.	.09 .11

OUTLET BOXES, OCTAGON & ROUND

Univer- sal	Nos.	Size and Description	Depth	Knockouts Bottom Side	Price Black Galv.
	24151	3 1/2" Oct.-Conduit Box	1 1/2"	1-1/2"	\$0.11 \$0.13
	24151	3 1/2" "	1 1/2"	1-1/2"	.12 .15
	24151 FS	3 1/2" " With Stud	1 1/2"	1-1/2"	.21 .23
	54151	4" Oct.-Conduit Box	1 1/2"	1-1/2"	14 .17
	54151 FS	4" " With Stud	1 1/2"	1-1/2"	16 .19
	54151	4" " " With Stud	1 1/2"	1-1/2"	.21 .23
	54155	4" -Cond. & Loom B.	1 1/2"	1-1/2"	.20 .23
	54171	4" -Conduit Box	2 1/2"	1-1/2"	.25 .28

COVERS
For 3/4"-3 1/2"-4" Octagon & Round Boxes

			Black	Galvd.
24C-1	3 1/4"	Blank Cover Flat	\$0.05	\$0.07
24C-2	3 1/4"	Raised	.05	.07
24C-6	3 1/4"	Flat with 1/2" K. O. in Center	.06	.08
24C-7	3 1/4"	Raised with 1/2" K. O.	.06	.08
24C-12	3 1/4"	1/2" Metal Bushing	.06	.08
24C-28	3 1/4"	Spider for Switch or Receptacle	.07	.09
24C-31	3 1/4"	Raised Federal Sign	.06	.08
24C-33	3 1/4"	Flat 1 1/2" hole for other	.20	.22
24C-35&36	3 1/4"	Raised 1 1/2" hole for other	.06	.08
24C-39	3 1/4"	Flat for fluted devices	.18	.20
54C-1	4"	Blank Cover Flat	.05	.08
54C-2	4"	Raised	.06	.09
54C-3	4"	Open 1/2" Deep	.08	.08
54C-6	4"	Flat with 1/2" K. O. in Center	.06	.09
54C-7	4"	Raised with 1/2" K. O.	.07	.10
54C-12	4"	1/2" Metal Bushing	.06	.09
54C-28	4"	Spider for Switch or Receptacle	.07	.09
54C-31	4"	Raised Federal Sign	.07	.09
54C-33	4"	Flat 1 1/2" Hole for Std.	.20	.22
54C-35-6	4"	Raised 1 1/2" Ring	.06	.08
54C-39	4"	Flat for Fluted Devices	.20	.22
54C-45	4"	Raised 1/2" High Open	.07	.10

OUTLET BOXES—Square 4" & 4 1/4"

Universal No.	Size and Description	Depth	Knockouts Bottom	Side	Price Black	Galvd.
51151 4"	Sq. Comb. Gas & Elect.	1 1/4"	5-1/4"	8-1/4"	\$0.16	\$0.20
51151 4"	"	1 1/4"	5-1/4"	8-1/4"	.18	.22
52151 4"	Conduit Box	1 1/4"	5-1/4"	10-1/4"	.16	.20
52151 4"	"	1 1/4"	5-1/4"	10-1/4"	.18	.22
52171 4"	"	2 1/4"	5-1/4"	10-1/4"	.60	
72151 4 1/4"	"	2 1/4"	5-1/4"	10-1/4"	.50	
72171 4 1/4"	"	2 1/4"	5-1/4"	10-1/4"	.54	

COVERS For 4" & 4 1/4" Square Boxes

			Black	Galvd.
52C-1	4"	Sq. Blank Flat	\$0.08	\$0.10
52C-2	4"	Raised	.11	.13
52C-3	4"	Raised 1/2" High Open	.12	.15
52C-6	4"	Flat with 1/2" K. O. in Center	.10	.12
52C-7	4"	Raised with 1/2" K. O.	.13	.16
52C-12	4"	1/2" Metal Bushing	.11	.13
52C-13	4"	1/2" for Rect. Switch or Recept.	.10	.12
52C-14	4"	"	.10	.13
52C-15	4"	"	.15	.17
52C-16	4"	1 1/4" 2	.18	.21
52C-17	4"	1 1/4" 2	.13	.16
52C-18	4"	1 1/4" 2	.15	.17
52C-19	4"	1 1/4" 2	.21	.23
52C-21	4"	1 1/4" 2	.23	.26
52C-28	4"	Flat Spider for Snap Switches	.15	.17
52C-31	4"	Raised for Sign Rec.	.40	.49
52C-35-36	4"	"	.14	.16
52C-39	4"	Fluted Devices	.27	.30
52C-48	4"	with 2 1/4" Opening	.10	.13
52C-57	4"	For French Fixture	.34	.37
52C-62	4"	Single Sw. 3/4" High	.10	.12
72C-1	4 1/4"	Sq. Blank Flat	.27	.32
72C-2	4 1/4"	Raised	.32	.34
72C-3	4 1/4"	Raised Open	.34	.34
72C-7	4 1/4"	With 1/2" K. O. in Center	.34	.34
72C-12	4 1/4"	1/2" Metal Bushing	.34	.34
72C-14-15	4 1/4"	1/2" & 1" for Switch or Rec.	.36	.36
72C-18	4 1/4"	1/2" 2 Devices	.50	.50
72C-48	4 1/4"	Open 1/2" High	.34	.34
Special	4"	Cover for One Push or Toggle Switch or Single Duplex Receptacle	.18	.23
For Red	4"	Cover Two Push or Toggle Switches or Two Receptacles or Any Combination of Two Devices	.32	.36

EXTENSION RINGS For Octagon & Square Boxes

			Black	Galvd.
25151	3 1/4"	Octagon Ring—1 1/4" Deep	\$0.23	\$0.25
33151	4"	Octagon Ring—1 1/4" Deep	.25	.27
73151	4 1/4"	Square Ring 1 1/4" Deep	.60	
55171	4"	Octagon Ring 2 1/4" Deep	.44	.48
53171	4"	Square Ring 2 1/4" Deep	.70	
73171	4 1/4"	Square Ring 2 1/4" Deep	.65	

HANDY OR UTILITY BOXES & COVERS
For Use With Rigid Conduit

Description	Universal Numbers	Price
Box 3 1/4"x1 1/4"x1 1/4" For Rigid Cond.	58151	\$0.22
Box 4 1/2"x1 1/4"x1 1/4" For Rigid Cond.	58361	.22
Box 4 1/2"x1 1/4"x1 1/4" For Rigid Cond.	.2	
Box 4 1/2"x1 1/4"x1 1/4" For Rigid Cond.	58371	.22
Box 4 1/2"x1 1/4"x1 1/4" For Rigid Cond.	.60	
Cover Flat Steel Closed	58C1	.10
Cover Porcelain with Holes	.13	
Cover for Sple. Receptacle	58C5	.18
Cover for Duplex Receptacle	58C7	.18
Cover for Toggle Flush Switch	58C30	.18
Cover for Sple. Push Switch	58C3	.18
Cover for Sign Receptacle	58C38	.18
Cover for Snap Switches	58C28	.18
Cover with 1/2" K. O.	58C6	.16
Cover with 1/2" or 3/4" Nipple	.27	
Cover with Bushing for Cord	58C11	.16

CONCRETE BOXES WITH COVERS

Box & Back Plate with 1/2" Stud	Depth 1 1/4"	2"	2 1/4"	3"	3 1/4"	4"	5"	6"
Box & Back Plate less 1/2" Stud	.23	.27	.30	.34	.38	.40	.45	.55
Plate only 4 1/2" Round without Fixture Stud 3 1/4" and 2 1/4" K. O.	\$0.10							
Plate only 4 1/2" Round with 1/2" Fixture Stud 3 1/4" and 2 1/4" K. O.	.15							
Plate only 4 1/2" Round with 1/2" Fixture Stud 3 1/4" and 2 1/4" K. O.	.20							

SOLID GANG BOXES

	2	3	4	5	6	7	8
Box Price	\$.75	\$1.15	\$1.50	\$2.00	\$3.75	\$5.65	\$6.10
Cover	.38	.55	.75	.95	1.80	3.20	3.55

BOXES, OUTLET

NEW CODE OUTLET BOXES
Box Only

Size	Stud	Clamps	Bush Plates	Price	
3 1/4"x3 1/4" Round	Yes	Two	No	\$0.23	
3 1/4"x1 1/2" Round	Yes	Two	No	.27	
3 1/4"x1 1/2" Octagon	No	Two	Two	.23	
3 1/4"x1 1/2" Octagon	Yes	Two	Two	.27	
3 1/4"x1 1/2" Round	No	Two	No	.18	
3 1/4"x1 1/2" Round	Yes	Two	Two	.23	
3 1/4"x1 1/2" Octagon	No	Two	Two	.23	
3 1/4"x1 1/2" Octagon	Yes	Two	Two	.27	
4 1/2"x1 1/2" Octagon	No	Two	Two	.27	
4 1/2"x1 1/2" Octagon	Yes	Two	Two	.32	
G.E. Cable Boxes for Straight Electric or Combination No. 5200-01					.20
Hope Cable Boxes for Straight Electric or Combination No. 2 & 4 & 14					.20
Thomas & Betts No. 565-66-67-68 Standard Cable Boxes					.22
Thomas & Betts No. 553-554 Dead Ground Cable Boxes					.35
Thomas & Betts No. 160-161 Flush Wall Type Cable Boxes					.50

BAR HANGERS FOR OUTLET BOXES
Boxes Extra

(With 1/2" Fixture Stud)	Price
(With 1/2" Stud add 5c ea.)	Margin
Straight Bar 18" Long	\$0.23
Straight Bar 24" Long	.30
Shallow Offset Bar 19 1/4" Long	.28
Shallow Offset Bar 24" Long	.35
Deep Offset Bar 19 1/4" Long	.28
Deep Offset Bar 24" Long	.35
Straight Old Work Bar 12"	.15
Box Cleat Bar 21"	.12
Straight Saddle Bar	.20

SET-UP BOXES WITH BARS

Size	Ears	Clamps	Bush Plates	Galvd. Price
3 1/4"x3 1/4" Round	No	None	None	\$0.30
3 1/4"x1 1/2" Round	No	Two	None	.35
3 1/4"x1 1/2" Round	Yes	None	None	.35
3 1/4"x1 1/2" Round	Yes	Two	None	.40
For New Code Boxes				
3 1/4"x3 1/4" Oct.	Yes	Two	None	.45
3 1/4"x3 1/4" Oct.	Yes	Two	Two	.50
3 1/4"x1 1/2" Round	No	Two	None	.45
3 1/4"x1 1/2" Round	No	Two	Two	.45
4 1/2"x1 1/2" Oct.	Yes	Two	None	.50
4 1/2"x1 1/2" Oct.	Yes	Two	Two	.50
For Conduit				
4x1 1/2" Round	No	None	None	.30
4x1 1/2" Round	Yes	None	None	.35

BUSHINGS & LOCKNUTS

BUSHINGS & LOCKNUTS
For Rigid Conduit

	1/2"	3/4"	1"	1 1/4"
Locknuts—Each	\$.01	\$.01 1/4	\$.02 1/2	\$.05
Bushings—Each	.02	.02 1/2	.05	.08
Locknuts—Each	1 1/2" \$.08	2" \$.11	2 1/4" \$.19	3" \$.32
Bushings—Each	.10	.20	.30	.40
			.40	.88
				1.40

PORCELAIN CLAMP BUSHINGS

"Federal" or Equivalent

No.	K. O.	Inside Size	Outside Size	Wire Size	Bushing Each	Extra Ring Each
A-1	1/4"	1/4"	1/4"	No. 10	\$.08	\$.04
A-1 1/4"	1/2"	1/2"	1/2"	No. 10	.10	.04
A-2	3/4"	3/4"	3/4"	No. 8	.10	.04
A-3	1"	1"	1"	No. 8	.12	.05
A-4	1 1/4"	1 1/4"	1 1/4"	No. 00	.16	.07
A-5	1 1/2"	1 1/2"	1 1/2"	450 CM	.21	.10
A-6	2"	2"	2"	1 Mill. CM	.46	.12
B-1	1/4"	1/4"	1/4"	No. 10	.21	.04
K-1	1/4"	1/4"	1/4"	No. 10	.32	.04
K-2	3/4"	3/4"	3/4"	No. 8	.37	.05

"MULTI" PORCELAIN CLAMP BUSHINGS

No.	Inside Size	Outside Size	For Wires	Price Each Complete
10	1/4"	1/4"	14 B & S	\$0.08
12	1/4"	1/4"	14 B & S	.12
15	1/4"	1/4"	14 B & S	.10
20	1/4"	1/4"	6 B & S	.10
30	1/4"	1/4"	2 B & S	.12
40	1/4"	1/4"	000	.20
50	1 1/4"	1 1/4"	350,000	.30
55	1 1/4"	1 1/4"	600,000	.38
60	1 1/4"	1 1/4"	1,000,000	.45

PORCELAIN NO CLAMP BUSHINGS
Multi- With Spring Clip, Not Threaded

Catalog No.	Multi	90A	90B	91	92A	92B
Size of Hole	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
To Fit Hole	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Price	\$.06	\$.06	\$.06	\$.07	\$.07	\$.07

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The quality of **FA** Panelboards, in design, in construction and in service delivered, help a great deal in building the reputation of the contractor who installs them. Panelboards are the only part of a wiring job that shows after the plaster is on and **FA** Panelboards therefore become an indication of quality throughout — "The Sign of a Better Job."

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No. 5021
FOR
INDUSTRIAL
USE

with **Outlet
Box Cover**



Cat. No.	Description
5020	Single-Pole with 3½" Cover
5021	Double-Pole " " "
5022	3-Way " " "
5023	4-Way " " "
5024	2-Circuit " " "
5025	3-Circuit " " "
5026	Single-Pole with 4" Cover
5027	Double-Pole " " "
5028	3-Way " " "
5029	4-Way " " "
5030	2-Circuit " " "
5031	3-Circuit " " "



For pipe jobs in factories, workshops, garages, warehouses—all industrial buildings modern or modernized. . . This new Combination brings together your ARROW Switch mechanism and Outlet Box Cover. Brings them ready-assembled into your stock and onto your jobs. Right in line with the trend in many localities to restrict industrial wiring to pipe jobs. And in line with ARROW'S aim to simplify your work. . . ONE UNIT for switch and outlet box cover means quicker, handier installations; replaces two stock items with one. Switch cover held by one screw in center; easiest assembly for you. . . Combination comes made up with 3½" or 4" cover. Order by Catalog number in table at left to have your requirements in hand for the Fall business. ♦ ♦ ♦ ♦

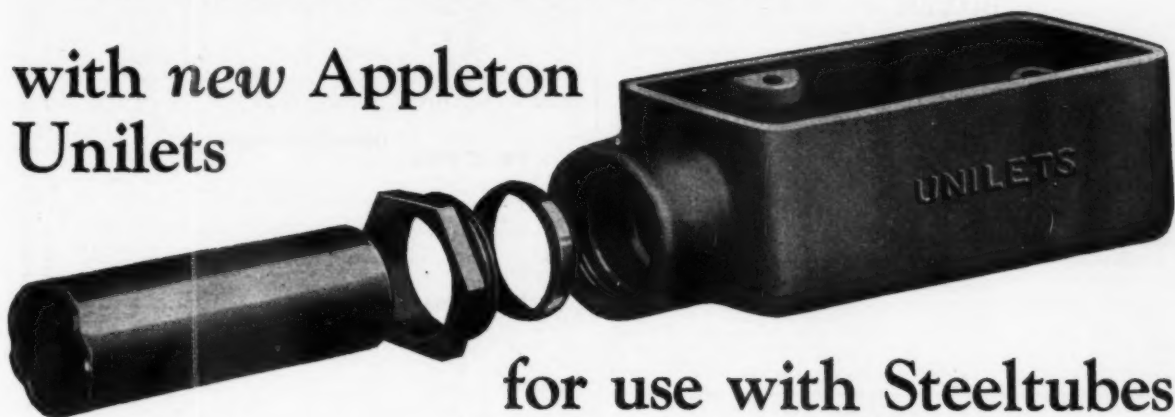
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INSTALLATION TIME SAVED!

with new Appleton
Unilets



for use with Steeltubes

The most simple and efficient method for installation with Steeltubes—Threadless Thin Wall Conduits—is with the new Appleton No-Thread Malleable Unilets.

A new brass sleeve with a tightening nut now quickly and easily fits into these Appleton Unilets. The brass ring drops into position and the nut tightens the ring securely to the Thin Wall Conduit, and makes a vaporproof and watertight connection.

This method is less cumbersome in handling and in appearance and saves time and money in installation.

The opening in the new fitting takes all standard covers and receptacles for Rectangular Unilets. These new Malleable Unilets in rectangular, round and all other types, are available for Thin Wall Conduit and can be shipped from stock simply by specifying catalogue numbers applying to the Threaded Unilets and adding the letter T—for example, 9002T. (Rectangular Unilets are made for $\frac{1}{2}$ " to 2" Thin Wall Conduit.)



Figure 1



Figure 2



Figure 3



Figure 4

New Couplings and Connectors

The new brass ring and tightening nut are also used as part of the Coupling in connecting two pieces of Thin Wall Conduit (see figure 1); and are used with the Connector in connecting the Thin Wall Conduit with a "knockout" box (see figure 3). Figure 2 illustrates the Coupling as it appears when assembled. All Couplings and Connectors are available for $\frac{1}{4}$ " to 2" Thin Wall Conduit. Figure 4 illustrates Malleable One-Screw Conduit Clamp for fastening Thin Wall Conduit to wall.

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APPLETON ELECTRIC COMPANY

1704 Wellington Ave., Chicago, U. S. A.

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No-Thread Malleable

UNILETS

For Steeltubes—Threadless Thin Wall Conduit



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1704 Wellington Avenue, Chicago
Gentlemen:

Please send us a copy of New Revised Catalog and Conduit Fittings, together with prices.

Name.....

Address.....

City.....

State.....

Size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Without Locknut.....	\$.05	\$.11	\$.14	\$.15	\$.20	\$.30	\$.45	\$.85
With Locknut.....	.09	.15	.18	.24	.30	.45	.77	1.15
Socket Bushings								
Black Composition.....					1/8"	3/4"	3/8"	1/2"
For Sockets.....					\$.02	\$.02	\$.04	\$.08

NON-ADJUSTABLE TYPE

"Full- Steel City Co."			"Lat- man" Fullman Mfg. Co."	Ru- sell & Stoil	Description	Price
477	110	2580			Comp. Out. with Std. Rec. & Bell Nozzle	\$4.00
490	100	2590			" " Less Std. Rec. with Stem Nozzle	3.50
491	100	2590			Comp. Out. Less Std. Rec. less Nozzle	2.40
499	.....	.....			Comp. Out. with 20A. Polara. Rec. & Bell Noz.	4.90
499	.....	.....			Midset Out. with 10A. Receipt. No Nozzle	2.25
495	.....	.....			Square Out. Less Receipt. with Bell Nozzle	4.30
496	.....	.....			Square Out. With 15 Amp. Rec. & Bell Nozzle	5.40
497	.....	.....			Sq. Out. With 25 A. Rec. & Large Bell Nozzle	8.60

ADJUSTABLE TYPE

400	120	2502	Complete-Shallow Box—Less Receptacle	\$4.30
400	....	....	Complete-Deep Box—Less Receptacle	5.25
401	130	....	Complete-Shallow Box With Receptacle	5.35
401	....	....	Complete-Deep Box With Receptacle	6.30
420	....	....	Complete Large Size Box Without Receptacle	4.90
421	....	....	Complete Large Size Box With Receptacle	5.95

ADJUSTABLE GANG TYPE

441	251	2511	Single Gang Less Recept. with 1/2" Cover Plate	\$ 5.35
442	252	2512	Two " " " " " "	10.75
443	253	2513	Three " " " " " "	16.10
444	254	2514	Four " " " " " "	21.45
445	....	2515	Five " " " " " "	26.90
Extra for Brass Cover Plate and Receptacle..... Per Gang				1.25

G. E. & T & B BOXES

G. E.	T & B	Description	
8000	8000	Utility Outlet Box.....	\$.90
8200	1700	Two Wire Floor Box.....	4.00
8220-40	1701	Three Wire Floor Box.....	5.00
8300	1200	Special Outlet Extension Type.....	2.60
8400		Master 2 Wire Plug Outlet.....	5.60
8420-40		Master 3 Wire Plug Outlet.....	6.50
.....	100-200	Complete-Cover, Nozzle, Plug and Receptacle.....	4.00
.....	1100	Complete-Cover, Nozzle, Plug and Receptacle.....	8.25

BOXES, CUTOUT

TYPE "A" STEEL SURFACE CUTOUT BOXES
Black

Width Length.			Short Long			Width Length			Short Long		
Side	Side	Deep	Side	Side	Deep	Side	Side	Deep	Side	Side	Deep
4½	5	\$.55	.....	.....	.....	12	30	.....	.....	.....	.....
4½	9	.65	.....	.....	.....	15	15	.....	.....	2.75	4.15
4½	9 3½	.65	.....	.....	.....	15	18	.....	.....	3.00	4.75
6	6	.85	\$.80	.....	.....	15	24	.....	.....	5.70	6.50
6	6	1.00	.95	.....	.....	18	30	.....	.....	13.35	15.40
6	6	.85	1.50	.....	.....	18	30	.....	.....	5.45	8.30
6	12	1.35	1.10	.....	.....	18	21	.....	.....	10.65	12.50
8	8	1.35	1.05	.....	.....	18	24	.....	.....	12.20	13.00
8	10	1.45	1.20	.....	.....	18	30	.....	.....	15.20	15.40
8	12	1.80	1.40	.....	.....	18	36	.....	.....	17.80	19.40
8	12	1.15	.80	.....	.....	20	40	.....	.....	14.50	17.40
9	12	1.40	2.15	.....	.....	24	34	.....	.....	15.30	17.30
10	10	1.70	1.40	.....	.....	24	30	.....	.....	19.10	20.80
10	12	1.95	1.70	.....	.....	24	36	.....	.....	22.35	23.75
10	15	2.35	1.85	.....	.....	24	40	.....	.....	24.30	26.00
10	18	2.70	3.00	.....	.....	24	44	.....	.....	41.35	45.30
12	12	2.25	1.80	.....	.....	30	30	.....	.....	27.20	29.65
12	12	2.40	1.10	.....	.....	30	32	.....	.....	30.55	33.00
12	18	.....	2.50	.....	.....	30	42	.....	.....	48.85	53.00
12	24	.....	4.40	.....	.....	30	48	.....	.....	56.70	61.30

For Galvanized Boxes Add 59% to above prices.

BELLS & BUZZERS

Ansonia

Name	No.	Description	Buzzer	2 1/4" Bell	3" Bell	4" Bell	Cow or Sleigh
Ansonia	056	Sale. Coil Non Adjust.	\$.40	\$.45	.....	.....	.....
Ansonia	057	Dbble. Coil Non Adjust.	.50	.55	.....	.....	.....
Ansonia	052	Dbble. Coil Round Non Adjust.	.55	.60	.....	.....	.....
Wizard	059	Dbble. Coil Non Adjust.	.90	.95	.....	.....	.....
Eureka	641	Dbble. Coil Adjust. Class B.	.95	1.00	\$1.25	\$1.60	\$1.80
Acme	031	Dbble. Coil Adjust. Class A.	1.33	1.40	1.60	1.80	2.10
Eureka	021	Dbble. Wood Box Bell	1.20	1.35	1.40	1.65	1.85
Monitor	058	Round Type	.....	1.50	.....	.....	.....
Monitor	061	Round Type	.....	1.30	.....	.....	.....
Wizard	060	Comb. Bell & Buzzer	1.25	1.25	1.85	.....	.....
Wizard	055	Buzzer Oct Mat	.70	.....	.....	.....	.....
Wizard	066	Watch Case Buzzer Round	1.25	.....	.....	.....	.....
Ansonia	063	Comb. Bell & Buzzer	1.00	1.00	1.10	.....	.....

BELLS AND BUZZERS—Continued
Edwards

Name	No.	Size	Description	Price
Nubel	735	2 1/4"	Two Coil Non-Adjust.-Gray Enam. Bell	.65
"	736	"	" " " " Buzzer	.60
Dixie	720	2 1/4"	" " " " Class C-Non-Adjust. Bell	.95
"	725	"	" " " " " Buzzer	.90
Cambell	737	2 1/4"	Two Coil Non-Adjust.-Gray Enam. Bell & Buzzer	1.15
Tubell	738	"	Dble. Coil-Gray Enam. Two Bells	1.20
Cadet	710	2 1/2"	Two Coil-Class B-Adjust. Bell	1.00
"	715	"	" " " " " Buzzer	.95
"	712	3"	" " " " " Bell	1.25
"	714	4"	" " " " " Bell	1.60
"	730	"	" " " " " Cow or Sleigh	1.80
Buz-A-Bell	730	2 1/4"	Two-Coil-Class C Comb. Bell & Buzzer	1.20
Monitor	156	3"	Monitor Bell-Nickel Plated Gong	1.50
Bronx	750	1 1/4"	Nickel Watch Case Buzzer	1.25

Edwards—Lungen

No. 13 Bells		Price
Size		
1"	.....	\$2.00
1 1/2"	.....	1.80
2"	.....	1.90
2 1/2"	.....	2.00
3"	.....	2.30
4"	.....	0.50
6"	.....	0.50
Cow or Sleigh	.....	3.25

No. 15 Buzzers

Size	No. 0.	Price
1 1/2" x 1 1/2"	No. 0.	\$1.85
2 1/2" x 1 1/2"	No. 1.	1.50
2 1/2" x 1 1/2"	No. 2.	1.70
3" x 2 1/2"	No. 3.	2.00
3 1/2" x 2 1/2"	No. 4.	2.20

Partrick & Wilkins

Iron Box Bells

[illegible]

Buzzers

Small Iron Box Buzzer Non-Adjust. Dble. Magnet	\$.75
Watch Case Buzzer Nickeled.....	1.10
Midget Buzzer Nickeled.....	1.85
Wood Box Buzzer.....	2.15
Flush Buzzer with Flush Plate.....	3.35

Wood Box Bells

Regular Type		Large Type	
2 1/4" Regular.....	\$ 2.20	6" Regular.....	\$ 6.55
3" ".....	2.30	8" ".....	8.00
4" ".....	2.60	10" ".....	13.10
Standard Cow or Dinner...	3.10	5" Dinner.....	11.25
3" Dinner.....	5.15	6" ".....	13.05
4" ".....	8.65	5" Cow.....	13.75
3" Cow.....	6.75	6" ".....	16.00
4" ".....	10.00		

Stanley & Patterson

Name	No.	Description	Buzzer	2 1/2" Bell	3" Bell
Competition	400-1	Dble. Coil Non-Adjust.	\$.60	\$.65	
Eclipse	200-3	" " " "	.90	.95	\$1.00
XXX	211-18	" " Adjust. B.	.95	1.00	1.25
Marlo	221-20	" " " A	1.05	1.70	1.85
Eclipse	208	Comb. Bell & Buzzer	1.25	1.25	.....
Competition	402	" " " "	1.00	1.00	.....
Midget	331-34	All Nickled Bell	1.50	1.80	.....
P. R.	240	Watch Case Buzzer	1.25	.....	.....
P. R.	238	Monitor	.....	1.50	.....

Name	No.	Description	Bell	Cow or Sleigh
Competition	400-1	Dble. Coil Non-Adjust.	.....	.....
Eclipse	200-3	" " " "	\$1.30	.....
XXX	211-18	" " Adjustable B.	1.60	\$1.80
Marlo	221-20	" " " A	2.25	2.65
Eclipse	208	Comb. Bell & Buzzer	.....	.....
Competition	402	" " " "	.....	.....
Midget	331-34	All Nickled Bell	.....	.....
P. R.	240	Watch Case Buzzer	.....	.....
P. R.	238	Monitor	.....	.....

Schwarze and Liberty

	Buzzer	2½"	3"	4"	Tea
Single Coil Bell No. 31 & 32.....	\$.60	\$.65	\$.80	\$1.50	\$1.00
Two Coil Bell No. 311-321.....	.55	.60	.65	.90	.....
Combination Bell & Buzzer No. 331-333.....	.90	.90	.....	.....	.....
Flush Type Buzzer No. 31S.....	1.25				

SKELETON BELLS

Any Make

	2 1/4"	3"	4"	5"	6"	8"	10"	12"
Faraday . . .	\$5.70	\$6.00	\$7.00	\$9.40	\$10.60	\$16.00	\$25.00	\$31.00
Faraday Elka. 5.25	5.50	6.60	7.75	8.75	14.25	21.25	27.50	

Push Buttons, Etc.

Brackets for Insulators

PUSH BUTTONS, TREADS, SPRINGS

STANDARD PUSH BUTTONS AND TREADS

Description	Ana.	Edw.	Fara.	P&W	Price
Round 1 1/2" and 1 3/4" Stamped Brass.....	506	603	SP51	29	\$0.25
Round 2 1/4" Stamped Brass.....	527	600	SP50	27	.25
Round 2 1/4" with Card Holder Brass.....	507	601	SP57	25	.40
Rectangular 4 1/2" S. B. Brass.....	604	SP54	55		.40
Rectangular 3 1/4" x 1 1/4" S. B. Brass.....	605	SP53	50		.40
Oval 2 1/2" x 1 1/2" S. B. Brass.....	606	SP55	30		.30
Oval 4 1/2" x 2 1/2" S. B. Brass.....	609	SP56	45		.45
Pear Push Buttons—Wood or Composition.....	505	67	5-9	3	.60
Pear Push Buttons—Metal, Nickel or Brass.....	68	MP8			.85
Desk Buttons—3/4" Hole—Nickel.....	562	59	7A		.75
Desk Buttons—3/4" Hole—Nickel.....	63				.65
Desk Buttons—3/4" Hole—Nickel.....	D33	620	5A		.45
High Voltage 3/4" Hole—10 Volts.....	85		855		2.40
Table Clamp with Push Button.....	571	206	TC1		1.00
Floor Pushes Combination Nickel.....	560	235	CFP2		.85
Floor Treads—"Daisy" "Dixie".....	800	290	FT1		1.50
Wood Push Buttons.....					.20

COMPOSITION MOULDED PUSH BUTTONS

Round Plain 1 1/2" Diam.....	\$0.35	Rectangular Plain 1 1/2" x 3 1/4".....	\$0.45
Octagon Fancy 1 1/2" x 1 1/2" Diam. .40		Rectangular Fancy 1 1/2" x 3 1/4".....	.70
Oct. Card Holder 2 1/2" x 2 1/4" Diam. .50		Rec. Double Card Holder.....	.90

DESK PUSHES—COMPOUND

With Buttons

Make and Description	1	2	3	4	5	6
Edw. #146—Bakelite Block.....	\$2.10	\$2.50	\$3.20	\$3.65	\$4.50	\$5.25
Edw. #197 Less Cord Bake.Bl.....	3.30	4.75	6.00	7.25	8.50	9.75
Edw. #197 with 6' Cord Bake.Bl.....	4.05	6.10	7.75	9.45	11.15	12.85
Edw. #190 Wood—Less Cord.....	4.00	5.35	6.60	8.10	9.40	10.80
Edw. #190 Wood with Cord.....	4.45	6.65	8.35	10.30	12.05	13.90
Fara. #4C Wood Less Cord.....	2.00	2.30	2.60	3.05	3.50	3.90
Fara. #2A Wood Less Cord.....	4.90	7.00	8.50	10.60	12.40	13.80
Fara. B.D.P. Bake. Less Cord.....	3.50	4.75	6.00	7.25	8.50	9.75
Fara. M.D.P. All Metal Less Cord.....	6.00	11.00	16.00	21.00		
P&W #4 Wood Less Cord.....	2.60	2.80	3.50	4.30	4.85	5.60
P&W #5 Wood Less Cord.....				13.00		13.95
P&W #12 Wood Less Cord.....	3.30	4.25	5.45			6.00

DOOR AND WINDOW SPRINGS

Door Springs

Window Springs

Open Circuit Door Spring.....	\$0.40	Open Circuit Single.....	\$0.60
Closed Circuit Door Spring.....	.50	Open Circuit Double.....	.85
Open Circuit Make and Break.....	.50	Closed Circuit Single.....	1.00
Open Circuit Door Trip.....	1.00	Open Circuit Transom.....	1.60

OTHER PUSH BUTTONS

Ansonia

Round Stamped	Price	Round Cast	Price
514 1 1/2" Loose Back.....	\$0.30	511 1 1/2" Loose Back.....	\$0.90
515 2 1/4" Loose Back.....	.40	512 2 1/4" Loose Back.....	1.00
513 1 1/2" Loose Back.....	.95	508-10 2 1/4" Loose Back.....	1.00
579 1 1/2" Flush Push.....	1.00	540 2 1/4" Loose Back.....	.60
E33 1 1/2" Flush Push.....	1.00	550 2 1/4" Loose Back.....	.85
		570 2 1/4" Loose Back.....	.75

Other Ansonia Push Buttons, Etc.

F-33 Stamped Flush Push.....	\$0.70	545 Oblong 2 Gang for Cards.....	\$1.85
G-33 Stamped Diamond Push.....	.70	545 Oblong 3 Gang for Cards.....	2.65
521-524 Stamped Push.....	.75	545 Oblong 4 Gang for Cards.....	3.65
528-534 Stamped Push.....	.95	540 Oblong 1 Gang.....	1.65
536-537 Stamped Push.....	1.00	547 Oblong 2 Gang.....	1.50
538 Stamped Oblong Push.....	1.25	548 Oblong 1 Gang.....	.75
541 Oblong for Card.....	1.65	549 Oblong 1 Gang.....	1.20
543 Oblong 2 Point.....	1.25	577 Diamond Push.....	.70
544 Oblong for Card.....	1.20	578 Diamond Push.....	.75
Combination Floor Pushes Complete 573.....			2.50
Combination Floor Pushes Complete 575.....			2.65
700 1 Point Wood Base Switch.....			.45

Edwards

Round Desk Buttons

Oblong Push Buttons

621—3/4" Hole.....	\$1.40	602—2 Gang for Cards.....	\$1.00
622—1/2" Hole.....	1.45	607—Single for Cards.....	.40
625—3/4" Hole.....	.50	608—Single.....	.45

Partrick & Wilkins

Round Push Buttons

Stained Wood Push #2.....	\$0.15
Oak Wood Regular #1.....	.35
Oak Open, Closed and Dbl. Cont. #1.....	.65
Oak Triple Contact #1.....	.90
Cast Brass 1 1/2" Diam. #8.....	.70
Cast Brass 2 1/2" Diam. #9.....	.75

Oblong Pushes

16 Cast Brass 4 1/2" x 1 1/2" Screw Cap.....	\$1.55
31 Cast Brass 5 1/2" x 2 1/2" Screw Cap.....	2.30
44 Cast Brass 4 1/2" x 2 1/2" Screw Cap.....	1.40
708 Wrought Push and Speak 1 Pce.....	1.35
907 2 Button and Card Holder.....	2.15
908 3 Button and Card Holder.....	2.95
909 4 Button and Card Holder.....	4.55

OTHER PUSH BUTTONS—Continued

Partrick & Wilkins

Desk Push Buttons

Car Push 1 1/2" Hole Black Center.....	\$0.45
Multiple 3/4" Hole Black Center.....	1.35
Pony 3/4" Hole Black Center.....	1.85

Pear Shape Pushes

Compound Maple 2 Button.....	\$2.00
Compound Maple 3 Button.....	3.00
#4 Fancy Pear Two Piece.....	.25
Wood Rosettes for above.....	.40

MULTIPLE PUSH BUTTONS

Couch "Pushrites"

With Card Holders

Number		Wood Base Type			Flush Brass Plate Type	
Buttons	Plain Base Number	Price	Weighted Base Number	Price	Number	Price
4	7900	\$ 3.35	7980	\$ 3.75	7940	\$ 5.00
6	740	4.60	780	5.20		
8	7910	5.80	7990	6.65	7950	9.15
12	7921	8.30	79010	9.60	7960	13.30
16	7930	10.80	79020	12.45	7970	17.50
20	793	13.30	7902	15.40	797	21.60

COUCH UNMOUNTED PUSH BUTTONS "WORKRITES"

No. 97 for 1/2" Hole.....	\$0.50
Adaptor No. 0684 for same.....	.05

BRACKETS FOR INSULATORS

WOOD BRACKETS

Each	Each
1 1/2" x 2" x 10".....	\$1.10
1 1/2" x 2" x 12".....	.10
1 1/2" x 2 1/4" x 12".....	.10
2" x 2 1/4" x 12".....	.12
2" x 3" x 12".....	.16

PINS

Each	Each
Locust 1 1/2" x 8".....	\$1.10
Oak 1 1/2" x 8".....	.05
Locust 1 1/2" x 9".....	\$1.12
Oak 1 1/2" x 9".....	.08

HOUSE BRACKETS WITHOUT INSULATORS

Peirce

No.	Light Type	Price	No.	Heavy Type	Price	No.	Corner Type	Price
153	One	\$.25	154	One	\$.40	150	One	\$.30
253	Two	.55	254	Two	.80	242	Two	.55
353	Three	.90	354	Three	1.10	342	Three	.80

WIREHOLDERS WITH INSULATORS

Peirce

No.	Wires	Spacing	Price
1607	One	0	\$.25
190	"	0	.25
191	"	0	.30
296	Two	6	.55
299	"	9	.55
394	Three	4 1/2	.80
396	"	6	.85

HOUSE RACKS WITH INSULATORS

Peirce

No.	Wires	Length	Space	Price
183	1	6 1/4	0	\$.40
286	2	12 1/4	6	.80
383	3	12 1/4	9	.95
388	3	18 1/4	6	1.20

SECONDARY RACKS WITH INSULATORS

Peirce

No.	Light Type	Price	No.	Heavy Type	Price
276	Wires	\$.90	278	Wires	\$1.30
376	Space	1.30	378	Space	2.15
1276	2	.85	1278	2	1.20
1376	3	1.20	1378	3	1.35
2768	2	.90		4"	2.00
3768	3	1.30	1378	3	8"

INSULATORS ONLY FOR ABOVE BRACKETS

Peirce

355 Insulator.....	\$.18	1602 Insulator.....	\$.12
356 ".....	.25	1603 ".....	.10

HOUSE BRACKETS WITHOUT INSULATORS

National Elec. Products

Light Type			Heavy Type			Corner Type		
No.	Points	Price Each	No.	Points	Price Each	No.	Points	Price Each
108-10	1	\$.25	109-10	1	\$.45	111-10	1	\$.30
			123-6-7	1	.40	111-50	1	.50
108-26	2	.55	109-26	2	.80	111-29	2	.60
108-29	2	.60	109-29	2	.85	111-36	3	.85
108-36	3	.95	109-36	3	1.15			

HOUSE RACKS WITH INSULATORS

National Elec. Products

Light Type			Heavy Type		
No.	Points	Length Each	No.	Points	Length Each
104-10	1	5 1/4" \$.45	101-24	2	9 1/4" \$1.10
104-26	2	11 1/4" .90	101-28	"	13 1/4" 1.65
104-33	3	11 1/4" 1.00	101-34	3	13 1/4" 1.75
104-36	"	18" 1.25	101-38	"	21 1/4" 2.40
			101-44	4	17 1/4" 2.20
104-53	5	18" 1.60	101-54	5	21 1/4" 2.70
104	Insulator Only .12		101	Insulator Only .18	

WIREHOLDER ACCESSORIES

National Elec. Products

No. 5000 Corner Chair....	\$.13	No. 5040 Break Arm Strap....	\$.14
No. 5020 Insulator.....	.18	No. 5051 " Bolt....	.20
No. 5021 U Bolts & Nuts..	.10	No. 5052 T Head Screw.....	.03

SINGLE POINT SCREW BRACKETS

National Elec. Products

No.	Points	Length Each	No.	Points	Length Each
5211.....	1	5 1/4" \$.20	5311.....	1	5 1/4" \$.13
5211L.....	2	11 1/4" .20	5311L.....	2	11 1/4" .15
5213.....	3	11 1/4" .25	5313.....	3	11 1/4" .20
5213L.....	3	18" .28	5313L.....	3	18" .22

WIREHOLDERS WITH INSULATORS

National Elec. Products

For One Wire		For Two Wires		For Three Wires	
No.	Each	No.	Each	No.	Each
No. 5011.....	\$.25	No. 5002.....	\$.60	No. 5003.....	\$.85
No. 5001.....	.25	No. 5012.....	.55	No. 5023.....	.80

WIREHOLDERS WITH INSULATORS

National Elec. Products

Light Type			Heavy Type		
No.	Points	Length Each	No.	Points	Length Each
105-1X	1	6" \$.25	106-1	1	6" \$.60
105-1	1	6" .30	106-10	1	6" .65
105-10	1	4 1/4" .30	106-26	2	11 1/4" 1.25
105-26	2	10 1/4" .55	106-29	2	14 1/4" 1.30
105-29	2	13 1/4" .60	106-36X	3	17 1/4" 1.85
105-34	3	13 1/4" .85			
105-36	3	16 1/4" .85			
105	Insulator Only .12		106	Insulator Only .10	

B-SUNDRIES, BOLTS, ETC.

CARRIAGE BOLTS

Galvanized

	Length	3 1/4"	4"	5"	6"	8"
1/2" Diam. Each..	\$.05	\$.05	\$.05	\$.05	\$.07	\$.07
3/4" " " " "	.08	.09	.09	.10	.10	.11

MACHINE BOLTS WITHOUT WASHERS

Galvanized

Diam.	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"
1/2" Each.....	\$.05	\$.06	\$.07	\$.08	\$.08	\$.09	\$.10	\$.12	\$.14	\$.15
3/4" " " " "	.08	.09	.10	.11	.12	.13	.15	.18	.20	.23
1" " " " "	.12	.13	.14	.15	.16	.18	.20	.22	.25	.27
1 1/4" " " " "	.15	.16	.17	.19	.20	.22	.25	.28	.32	.35

STOVE BOLTS

Round or Flat Head

	Length	3 1/4"	4"	5"	6"	8"
Up to 1" Long Per Dozen.....	\$.10	\$.10	\$.12	\$.15	\$.20	\$.25
1 1/4" to 1 1/2" " " " "	.10	.10	.12	.15	.20	.25
1 1/2" to 2" " " " "	.10	.12	.15	.20	.25	.30
2" to 3" " " " "	.20	.25	.30	.35	.40	.45
3 1/4" to 4" " " " "	.25	.30	.35	.40	.45	.50

TOGGLE BOLTS, STEEL

"Paine"

Size—Diameter	Long	3"	3 1/4"	4"	5"	6"
1/2" Long Price Each.....	\$.10	\$.10	\$.10	\$.10	.....	.....
3/4" " " " " "	.10	.10	.10	.10	.11	.12
1" " " " " "	.11	.11	.12	.12	.13	.13
1 1/4" " " " " "	.13	.13	.14	.14	.15	.15

NOTE: For Brass Toggle Bolts—94¢ times above prices.

ROUND FIXTURE BLOCKS

Solid Half or Full Plowed

3" x 4" Round	4 x 5" Round	5 x 6" Round
\$.12	\$.13	\$.18

Ceiling Button—P & S Porcelain No. 170—Each..... \$.12
Switch Bases—See Snap Switches Page PL-19.

CORDS, FIXTURE, LAMP AND HEATER

SINGLE FIXTURE CORD

Single Lamp Cord		Price Per Foot			
Type	No. 18	No. 16	No. 14	No. 12	
Single Cotton Covered Cord—Light F-64	\$.01	\$.02	\$.02 1/2	.....
Single Cotton Covered Cord—Heavy F-32	.01 1/4	.02	.03	\$.04	
Single Artificial Silk Cord—Light... F-64	.01 1/4	.02 1/4	.03	.....
Single Artificial Silk Cord—Heavy... F-32	.01 1/4	.03	.04	.....

DOUBLE LAMP CORD

Regular Lamp Cord		Price Per Foot			
Type	No. 18	No. 16	No. 14	No. 12	
Cotton Covered Twisted Pair..... C	\$.02 1/2	\$.03	\$.05	\$.07	
" " Parallel Pair..... PO	.02 1/2	.04	.06	.....
" " Twisted Parallel Pair..... PD	.03	.05	.....	.....
Artificial Silk Twisted Pair..... C	.02 1/2	.04	.06	.....
" " Parallel Pair..... PO	.03	.05	.07	.....

REINFORCED CORD

Not Asbestos		Price Per Foot			
Type	No. 18	No. 16	No. 14	No. 12	
Cotton Covered Light Type 1/4" PS	\$.03	\$.04	\$.07	.....
" " Heavy 1/4" P	.04	.05	.07	\$.13	
Weatherproof Light Type 1/4" PSWP	.03 1/4	.04	.....	.....
Heavy Type 1/4" FWP	.04	.05	.07	.....

HEAVY DUTY PORTABLE CORD

"Duracord" or Similar. Extra Reinforced

Type PS Light 2 Cond. Port. Cord..		Price Per Foot			
No. 18	No. 16	No. 14	No. 12	No. 10	
" " Heavy 2 " " " "	\$.08	\$.11	\$.13	\$.17	\$.22
" " P Heavy 2 " " " "	.11	.14	.22	.26	.36

ALL RUBBER CORD

"Tirex" "Royal" "Super" "Indestructo" or Similar

SJ Junior 2 Conductor Black.....		Price Per Foot			
No. 18	No. 16	No. 14	No. 12	No. 10	
" " 2 " Green.....	\$.08	\$.10	.....	.....	.....
" " 2 " Black.....	.12	.15	.....	.....	.....
S Type Heavy 2 Conductor Black..	.12	.15	\$.19	\$.24	\$.30
" " 3 " " " " "	.14	.16	.24	.28	.38
" " 4 " " " " "	.16	.20	.29	.37	.48
" " Sgle. Cond. Black....	.07	.08	.10	.11	.13

HEATER CORD

Asbestos Covered		Price Per Foot			
No. 18	No. 17	No. 16	No. 14	No. 12	
Stand. Twisted or Wound Asbest. 1/4	\$.05	\$.05	\$.06	\$.08	\$.10
American Beauty Heater Cord Super Flexible.....	.....	.09	.08	.12	.21
Rockbestos Heater Cord.....	.07	.07 1/2	.08	.10	.20
Universal No. 0092 Super Flexible....	.....	.09	.08	.....	.....

"Deltabeston" Heater Cord		Price Per Foot			
No. 18	No. 17	No. 16	No. 14	No. 12	
Type A Asbestos Braid overall Loco Cab Cord.....	\$.09	.....	\$ .10	\$.11	\$.14
" C Cotton Braid overall.....	.07	.08	.08	.10	.....
" D " " on ea. cond.....	.07	.09	.08	.10	.....
" E Cotton on ea. Cond. & over both.....	.08	.10	.09	.11	.....

NOTE—For Armored Cords See Page PL-9.
" Extension Cords See Page PL-10.
" Fixture Wire See Pages PL-26 & 27.
" Bell Wire See Page PL-27.

MISCELLANEOUS CORD

Description		Price Per Foot			
Type	No. 18	No. 16	No. 14	No. 12	No. 10
x Brewery Cord..... CB	\$.03	\$.04	\$.06	.....	.....
x Canvas Cord..... CC	.04 1/4	.05	.07	.....	.....
x Deck Cable..... PWP	.05	.06	.08	.....	.....
x Packinghouse Cable..... PKWP	.05	.06	.08	.....	.....
x Stage & Theatre Cable... T	.05	.06	.08	\$.14	\$.16

x Note—These prices are based on less than coil lot trade prices.

CONDUCTING BELL CORD

Spun Silk

Number of Conductors		2	3	4	5	6	10	14	18
Cond. Cond. Cond. Cond. Cond. Cond. Cond. Cond. Cond. Cond.	Price Per Foot.....	\$.08	\$.18	\$.20	\$.21	\$.28	\$.38	\$.68	\$.88

Note—For Armored Lamp Cord See Page PL-9.

CONDUIT, ELBOWS, COUPLINGS, BUSHINGS, ETC.

RIGID CONDUIT

	Black Per Foot	Galv. Per Foot	Cutting & Threading Per Thread	Cutting Only Per Cut
1/2"	.10	.11	.20	.10
3/4"	.12	.13	.20	.10
1"	.17	.19	.25	.10
1 1/4"	.25	.27	.30	.15
1 1/2"	.30	.32	.35	.15
2"	.40	.43	.40	.20
2 1/2"	.60	.68	.50	.25
3"	.80	.88	.60	.30
3 1/2"	1.02	1.10	.70	.30
4"	1.25	1.35	.80	.30

THIN WALL CONDUIT

	1/2"	3/4"	1"
Threadless Thin Wall Conduit, Per Foot.....	\$.09	\$.12	\$.16
Adaptor, Each.....	.08	.12	.20
Coupling or Connector, Each.....	.22	.30	.40

Note—One Coupling with Bushings is Included with Each 10 Foot Length of Conduit.

ELBOWS OR BENDS, COUPLINGS, OR UNIONS, BUSHINGS, LOCKNUTS, REDUCERS

Price Each

Size Each	Bends or Elbows	Couplings	Bushings	Locknut	Union	Conpl. or Reducers
	Black Galv.	Black Galv.	Galv.	Galv.	Galv.	Galv.
1/2"	.16	.10	.10	.11	.02	\$.01
3/4"	.21	.24	.14	.15	.02 1/2	.01 1/2
1"	.32	.37	.18	.20	.05	.02 1/2
1 1/4"	.41	.46	.24	.26	.08	.05
1 1/2"	.54	.62	.30	.32	.10	.08
2"	.88	1.00	.40	.43	.20	.11
2 1/2"	1.45	1.65	.55	.62	.30	.19
3"	3.70	4.25	.74	.81	.40	.32
3 1/2"	8.10	9.30	1.00	1.10	.88	.40
4"	9.40	10.75	1.25	1.35	1.40	.58

Also on Page PL-10. Also on Page PL-5. Also on Page PL-12.

FLEXIBLE METALLIC CONDUIT "Greenfield", "Flexsteel", or Equivalent

Single Strip Per Foot....	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Double Strip Per Foot....	.11	.14	.17	.23	.42	.50
For Fittings for Metallic Conduit See Page PL-14.						
For Non-Metallic Conduit or Loom See Page PL-15.						
For Steel Armored Cable & Lead Covered See Next Item.						

CABLE, ARMORED & NON-METALLIC SHEATHED

ARMORED CABLE, "BX", "ABC", "FLEXSTEEL", OR SIMILAR

		Price Per Foot	No. 14	No. 12	No. 10
TWO CONDUCTOR	Solid	Single Strip	\$.05	\$.09	\$.13
THREE CONDUCTOR	Stranded	" "	\$.09	\$.12	\$.16
FOUR CONDUCTOR	Solid	" "	\$.20	\$.25	\$.30
ONE CONDUCTOR	Stranded	" "	\$.11	\$.12	\$.13
CONDUCTOR	Solid	" "	\$.11	\$.12	\$.13
OVALFLEX	2 Conductor	" "	.07	.11	.13
	3 Conductor	" "	.10	.14	....
		Price Per Foot	No. 8	No. 6	No. 4
TWO CONDUCTOR	Solid	Single Strip	\$.20	\$.29	\$.45
THREE CONDUCTOR	Stranded	" "	.25	....	....
FOUR CONDUCTOR	Solid	" "	.26	.35	.60
ONE CONDUCTOR	Stranded	" "	....	....	....
CONDUCTOR	Solid	" "	.14	.17	....
OVALFLEX	2 Conductor	" "	.15	.18	.31
	3 Conductor	" "	....	....	....

Double Strip Armored Cable add 90% to above prices.
Anti-Short Fibre Bushings for ABC Cable, Each..... \$.01
Clips or Staples 1/2" for Armored or Non-Metallic Cable, Each..... .01

"ABC" LEAD COVERED ARMORED CABLE

		Price Per Foot	No. 14	No. 12	No. 10
Single Conductor Solid Lead Covered.....		\$.13	....	....	....
" " Stranded " ".....		....	....	....	....
Two Conductor Solid " ".....		.20	\$.24	\$.30	....
" " Stranded " ".....		....	....	....	....
Three " " Solid " ".....		.27	.33	.40	....
" " Stranded " ".....		....	....	....	....
		Price Per Foot	No. 8	No. 6	No. 4
Single Conductor Solid Lead Covered.....		\$.20	\$.27	....	....
Two " " Solid " ".....		....	....	....	....
" " Stranded " ".....		.42	.58	....	....
Three " " Solid " ".....		....	....	....	....
" " Stranded " ".....		.58	.80	\$1.10	....

"ABC" ARMORED LAMP CORD

	Single Strip	No. 18	No. 16	No. 14
Plain Armored Lamp Cord, Two Conductor.....		\$.13	\$.14	\$.19
Add 30% for Double Strip				

NON-METALLIC SHEATHED CABLE "Romex", "Loomwire", "Wireflex", or similar

	(With or Without Ground Wire)	#14	#12	#10	#8	#6	#4
Wire 2 Conductor per Foot.....		\$0.05	\$0.06 1/2	\$0.09	\$0.13	\$0.19	\$0.25
Wire 3 Conductor per Foot.....		.08	.10	.13	.20	.27	.38
Fitting-Straps Each.....		.01	.01	.01	.01	.01	.01
Fitting-Clips Each.....		.03	.03	.03	....	....	....
Fitting-Connectors Each.....		.10	.10	.20	.20	.30	.55

CUTOUTS OR FUSE BLOCKS

PLUG CUTOUTS 30 Amp. Porcelain

Description	Price
Single Pole—Main Line.....	62569 \$.25
Double " ".....	62965 .35
Triple " ".....	62165 .50
Double Pole Single Branch.....	61935 .35
" " Double ".....	62587 .40
" " Single or Double Cross Branch.....	8020 .40
Triple to D. P. Double Branch.....	62199 .55
Triple Pole Single Branch.....	8042 .65
" " Double ".....	62135 .85

DEAD FRONT CUTOUT BASES

Plug Type—30 Amp.

	With Short Cover	With Long Cover
	Numbers Price	Numbers Price
BRYANT	71935 or 71935 \$.95	
Dble. Pole Single Branch.....	72587 " 72087 1.45	82587 or 82087 \$1.55
" " Dble. ".....	72199 " 72099 1.65	82199 " 82099 1.75
G. E. or TRUMBULL	With Covers	Without Cov.
	G.E. Trumbull Price	G.E. Price
3 Wire Single Branch—2 Circuit.....	2435 3199	\$1.35 2436 \$.70
3 " Double " —4 ".....	2440 4199	2.00 2441 1.00

ENCLOSED CARTRIDGE CUTOUTS OR BASES

	0-30 Amp.	31-60 Amp.	61-100 Amp.
Single Pole Main Line Enclosed Porcelain.....	\$.45	\$.75	\$1.55
Double " ".....	.60	1.55	3.10
Triple " ".....	.90	2.20	4.65
Double Pole Single Branch Porcelain.....	.80	2.00	....
" " Double ".....	1.45	3.85	....
Triple to Double Pole Double Branch Porcelain.....	1.65	4.65	....
Triple Pole Single Branch Porcelain.....	1.50	3.30	....
Triple Pole Double Branch Porcelain.....	2.50	6.60	....
Single Pole Main Line Cutout Base 600 Volt.....	.65	1.00	1.75

SLATE BASE

	250 Volt	600 Volt	30 A.	60A.	100A.	200A.	400A.	600A.
Single Pole-Slate Base-250 V.....	\$.55	\$.80	\$1.75	\$2.85	\$6.95	\$9.50	....	....
" " 600 V.....	.80	1.15	2.00	3.15	7.90	10.25	....	....

Prices on cutouts do not include fuses

C-SUNDRIES

GROUND CLAMPS

	1/2" to 1"	1 1/2" to 2"	2 1/2" to 3"	3 1/2" to 4"
Standard Adjustable Ground Clamps, any make.....	\$.12	\$.15	\$.20	\$.35
Blackburn.....	No. 3 \$.24	No. 4 \$.28	No. 5 \$.35	No. 6 \$.45
Other Types	B x 1/2" & 3/4" 1" 1 1/4" 1 3/4" 2" 2 1/2" 3"			
Chase Shawmut 3660-68.....	\$.25	\$.30	\$.35	\$.45
G. V. A Series 5000....	.25	.30	.35	.45

STRAPS, CLIPS OR CLAMPS

For Pipe, Without Screws

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Galvnd. Straps, 2 Hole.....	\$.01	\$.01	\$.01	\$.02	\$.02	\$.04	\$.05	\$.06
Per Pound.....	\$.20							
No. Straps per Pound....	45	40	25	20	13	12	7	5
Light Steel Straps, 1 Hole.....	.04	.05	.08	.08	....	....	....	....
Mall. Iron Clamps, 1 Hole.....	.06	.07	.08	.11	.18	.25	.45	.60
P & S Conduit Clamps.....	....	....	....	....	....	....	....	....
With Bolts-Series 1400.....	.10	.14	.18	.20	.25	....	....	....

(See Also Page PL-25)

COLORING & FROSTING LIQUID

	7 ounce Cans	15 ounce Cans	30 ounce Cans	1/2 Pint Bottle	1 Pint Bottle	Quart Bottle
Crescent (McGill).....				\$1.25	\$2.50	\$5.00
Celco.....	\$2.50	\$4.00	\$7.50			
Franco.....				1.25	2.25	4.00
Permacolor.....				1.65	3.00	5.00
Clips for Loom.....					2c Each or 3 for 5c	
Crowfeet.....		1/2, 3/4, 1, 1 1/4, 1 3/4, 2, 2 1/2, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/2, 7, 7 1/2, 8, 8 1/2, 9, 9 1/2, 10, 10 1/2, 11, 11 1/2, 12, 12 1/2, 13, 13 1/2, 14, 14 1/2, 15, 15 1/2, 16, 16 1/2, 17, 17 1/2, 18, 18 1/2, 19, 19 1/2, 20, 20 1/2, 21, 21 1/2, 22, 22 1/2, 23, 23 1/2, 24, 24 1/2, 25, 25 1/2, 26, 26 1/2, 27, 27 1/2, 28, 28 1/2, 29, 29 1/2, 30, 30 1/2, 31, 31 1/2, 32, 32 1/2, 33, 33 1/2, 34, 34 1/2, 35, 35 1/2, 36, 36 1/2, 37, 37 1/2, 38, 38 1/2, 39, 39 1/2, 40, 40 1/2, 41, 41 1/2, 42, 42 1/2, 43, 43 1/2, 44, 44 1/2, 45, 45 1/2, 46, 46 1/2, 47, 47 1/2, 48, 48 1/2, 49, 49 1/2, 50, 50 1/2, 51, 51 1/2, 52, 52 1/2, 53, 53 1/2, 54, 54 1/2, 55, 55 1/2, 56, 56 1/2, 57, 57 1/2, 58, 58 1/2, 59, 59 1/2, 60, 60 1/2, 61, 61 1/2, 62, 62 1/2, 63, 63 1/2, 64, 64 1/2, 65, 65 1/2, 66, 66 1/2, 67, 67 1/2, 68, 68 1/2, 69, 69 1/2, 70, 70 1/2, 71, 71 1/2, 72, 72 1/2, 73, 73 1/2, 74, 74 1/2, 75, 75 1/2, 76, 76 1/2, 77, 77 1/2, 78, 78 1/2, 79, 79 1/2, 80, 80 1/2, 81, 81 1/2, 82, 82 1/2, 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1				

SMALL FIXTURE & WIRE CONNECTORS

Solderless

Insulated Solderless Wire or Fixture Connectors Similar to "Simplex"	
"Wirenuts" "Marr" "NoTorch" "Wirelets" "Ideal" "Wiremold" Etc.—each	\$.10
Non-Insulated Solderless Wire Connectors—2 Screw—All Metal.....	.10

SET SCREW CONNECTORS

Round Brass

	Wire Size	No. 12-14	No. 10	No. 8	No. 6	No. 4
Divided Wall-2 Screws.....	4	\$.06	\$.08	\$.09	\$.10	\$.14
Hole Thru.....	4		.16	.12	.13	.18
	2			.13	.17	.20
	Wire Size	No. 2	No. 1/0	No. 2/0	No. 3/0	No. 4/0
Divided Wall-2 Screws.....	4	\$.15				
Hole Thru.....	4	.20	.26	.32	.50	.80
	2	.24	.30			
	2	.22	.28	.30	.45	.60

SOLDERLESS CONNECTORS

Dossier or Penn-Union

	No.	No.	No.	No.					
	1/0	2/0	3/0	4/0	250,000	300,000	400,000	500,000	
Size Code.....	3 to 1	2/0	3/0	4/0					
2 Way L's.....	\$0.75	\$0.80	\$1.00	\$1.20	\$1.40	\$1.65	\$1.90	\$2.50	\$2.05
Cable Taps.....	1.05	1.20	1.40	1.75	2.10	2.40	2.85	3.75	4.65
3 Ways & Y's.....	1.05	1.20	1.40	1.75	2.10	2.40	2.85	3.75	4.65
Lugs FB Ang.....	.55	.60	.70	.90	1.10	1.20	1.40	1.85	2.40

CORD & MOTOR CONNECTORS

		Complete		Body Only		Cap Only	
		No.	Price	No.	Price	No.	Price
Arrow							
Midget Comp.	8238		\$.50	.....	.....	.....	.....
" Arrotex	8239		.75	.....	.....	.....	.....
Motor Conn.	RP-8221		.55	8221	\$.45	RP	\$.12
" "	RL-8221		.60	8221	.45	RL	.20
" "	RA-8222		.55	8222	.45	RA	.13
" "	KM-8222		.65	8222	.45	KM	.23
" "	FM-8222		.70	8222	.45	FM	.25
" "	RH-8234		.90	8234	.60	RH	.35
" "	RG-8281		.90	8281	.60	RG	.35
" "	8334 & 35		.90	.....	.....	.....	.....
Bryant							
Motor Midget	KR-130		.60	130	.45	KR	.20
" Conn.	KG-103		.70	103	.45	KG	.25
" "	KT-130		.55	130	.45	KT	.15
GE							
Cord Connector	1340-1347		.90	1647	.45	6146	.50
Hubbell							
Cord Connector	5894		.80	5574	.55	5896	.30
" "	6116		.70	6118	.55	5964	.13
" "	6179		.75	6630	.55	6631	.20
" "	6180		.65	6630	.55	6181	.10
" "	5518		.80	5574	.55	5420	.25
" "	7083		1.35	7084	.85	7056	.75
" "	7090		1.80	7091	1.10	7092	.75
" "	6408		1.25	6400	.85	6149	.45
Weber							
Cord Connector	2274		.60	.74	.45	2200	.20
Wirt							
Cord Connector	.56		.55				

NOTE: For Attachment Plugs and other caps—See Pages PL-16 & PL-17

NOTE: For Attachment Plugs and other caps—See Pages PL-16 & PL-17

E-SUNDRIES

EXTENSION CORDS—MADE UP

With Plug & Socket, but Guards-Lamps & Handles Extra

Length in Feet	With	With Reinforced	With Artificial		
	Lamp Cord	Cord	Silk Cord and		
	and Key Socket No. 18 Twisted	Key Socket No. 18	No. 16	Key Socket Twist. or Paral. No. 18	No. 16
4 Foot.....	\$.75	\$.80	\$.85	\$.80	\$.85
6 ".....	.80	.90	.95	.80	.95
8 ".....	.85	1.00	1.05	1.00	1.05
10 ".....	.90	1.10	1.20	1.10	1.20
12 ".....	.95	1.20	1.30	1.20	1.30
14 ".....	1.00	1.30	1.45	1.30	1.45
16 ".....	1.05	1.40	1.55	1.40	1.55
18 ".....	1.10	1.50	1.65	1.50	1.65
20 ".....	1.15	1.60	1.75	1.60	1.75
22 ".....	1.20	1.65	1.85	1.65	1.85
24 ".....	1.25	1.75	1.95	1.75	1.95

Length in Feet	With All Rubber Cord and Weatherproof Socket			
	Light		Heavy	
	No. 18	No. 16	No. 18	No. 16
4 Foot.....	\$1.00	\$1.10	\$1.15	\$1.25
6 ".....	1.20	1.30	1.40	1.50
8 ".....	1.35	1.50	1.65	1.75
10 ".....	1.50	1.70	1.90	2.00
12 ".....	1.75	1.90	2.15	2.25
14 ".....	1.90	2.10	2.40	2.50
16 ".....	2.10	2.30	2.65	2.75
18 ".....	2.25	2.50	2.80	2.90
20 ".....	2.40	2.70	3.15	3.25
22 ".....	2.65	2.90	3.40	3.50
24 ".....	2.80	3.10	3.65	3.75

ELBOWS & BENDS

ELBOWS & BENDS For Rigid Conduit

	Size	3 1/2"	3 1/2"	1"	1 1/2"	1 1/2"
Black.....		\$.16	\$.21	\$.32	\$.41	\$.54
Galv.....		.19	.24	.37	.46	.62

	Size	2"	2 1/2"	3"	3 1/2"	4"
Black.....		\$.88	\$1.45	\$3.70	\$8.10	\$9.40
Galv.....		1.00	1.65	4.25	9.30	10.75

EXPANSION SHIELDS & ANCHORS

(Ackerman-Johnson—Dryvin—Star—Diamond—Packtite
or Similar)

Screws Not Included.

Expansive Screw Anchors or Caulking		Hammer	Drive Anchors With	Nail
Anchors for Machi e Screws or Bolts.			Size of Shield	Price
Size Screw or Bolt	Price		Shield	\$0.05
6-32 Screw	\$0.06			.06
8-32 "	.07			.07
10-24 "	.08			.08
12-24 "	.10			.10
1-4x20 Bolt	.12			.12
5-16x18 "	.15			.15
3-8x16 "	.18			.18
7-16x14 "	.20			.20
1-2x15 "	.25			.25
5-8x13 "	.30			.30

Multi-Size Screw Anchors

		Screw Size			
		5 to 10	8 to 14	16 to 20	16 to 20
Length of Anchor.....		$\frac{3}{4}$ "	1"	1"	$1\frac{1}{4}$ "
Price Without Screw.....		\$0.04	\$0.05	\$0.06	\$0.08

LAG SCREW ANCHORS (Diamond or Similar)

Takes Lag Screw	$\frac{3}{8}"$	$\frac{3}{4}"$	$\frac{3}{8}"$	$\frac{3}{4}"$	$\frac{3}{8}"$	$\frac{3}{4}"$
Price Without Lag Screw	\$.15	\$.15	\$.18	\$.25	\$.35	\$.35
Takes Lag Screw		$\frac{3}{8}"$	$\frac{3}{4}"$	$\frac{3}{8}"$	$\frac{3}{4}"$	$\frac{3}{8}"$
Price Without Lag Screw		\$.40	\$.60	\$.90	\$.90	\$1.00

FUSES

PLUG FUSES

Standard Plug Fuses—Any Make—\$.07 each or 5 for \$.25
(Some Manufacturers put these fuses up 4 in a box, in which case they should be retailed at 4 for \$.25.)

ENCLOSED FUSES, NON-RENEWABLE

Amps.	Non-Indicating Price Each		Indicating Price Each	
	250 Volts	600 Volts	250 Volts	600 Volts
	Fuse	Fuse	Fuse	Fuse
1 to 30.....	\$.10	\$.30	\$.20	\$.40
35 to 60.....	.20	.40	.35	.65
70 to 100.....	.60	1.10	.95	1.75
110 to 200.....	1.20	1.85	1.85	2.90
225 to 400.....	4.10	4.35	4.35	6.35
450 to 500.....	4.10	6.00	6.35	9.25
650 to 800.....	8.95	11.00	13.85	17.35

RENEWABLE FUSES

Fuses		Links		
Amps.	350 Volts	600 Volts	350 Volts	600 Volts
1 to 30.....	\$.50	\$ 1.10	\$.03	\$.05
35 to 60.....	1.00	1.25	.08	.06
65 to 100.....	2.00	3.00	.10	.10
110 to 200.....	4.00	5.00	.15	.15
225 to 400.....	7.50	11.00	.30	.30
450 to 600.....	11.00	16.00	.60	.60

FUSE WIRE

	1/4	1/2	1	2
Size in Amps.....	3	5	8	15
Price Per Pound.....	\$1.90	\$1.50	\$1.25	\$1.25
Price Per Foot.....	.01	.01 3/4	.02	.03
Size in Amps.....	20	25	30	40
Price Per Pound.....	\$1.00	\$1.00	\$1.00	\$1.00
Price Per Foot.....	.04	.05	.07	.10
Size in Amps.....	60	70	80	90
Price Per Pound.....	\$1.00	\$1.00	\$1.00	\$1.00
Price Per Foot.....	.15	.20	.22	.24

Fuse Strip Any Amperage.....\$1.00 per lb.

OPEN LINK FUSES

Small Wire Type

	1 to 30	35 to 60	65 to 100
Size in Amps.....	Amps.	Amps.	Amps.
Numbers.....	00-0-1-2-3	2-3-5	5
Price Each.....	\$.10	\$.14	\$.20

Large Strip Type

Size in Amps.	25-100	110-200	225-400
Numbers	7	7 to 16	10 to 16
Price Each	\$.20	\$.30	\$.60

Size in Amps.	425-600	600-800	800-1500
Numbers	10 to 16	28	40
Price Each	\$1.00	\$1.75	\$6.55

STAMPED SHEET METAL LINK FUSES

Type of Link.....	B	C	D	E-F-H-I-L-M
C to C Distance.....	1 3/4	2 3/4	2 3/4	See Catalog
Price Each.....	\$.11	\$.11	\$.16	\$.30

THREADED CONDUIT FITTINGS

STANDARD TYPES, COVERS EXTRA

"Condulets" "Taplets" "Unilets" "Electrolets" "V. V."
"Adaptilets" Etc.

	Form 7	1½"	3¼"	1"	1½"	1½"
A		\$.33	\$.44	\$.60	\$.87	\$ 1.12
B		.40	.50	.70	1.02	1.30
C		.50	.57	.83	1.25	1.71
CO-COV		.70	.91	1.05	1.75	2.25
E		.40	.60	.70	1.12	1.46
F						
Form 7		.70	1.12	1.75	3.08	4.46
LB-LF-L-LR-LBB		.56	.63	.91	1.47	1.96
FB-LB-LRB		.56	.63	.91	1.47	1.96
LBL-LBR-LW		.91	1.12	1.33	1.75	2.25
T All One Size		.67	.80	1.12	1.71	2.37
TA All One Size		.98	1.05	1.40	2.18	3.22
TB-TL-TR		.68	.81	1.12	1.71	2.38
U-UB		.68	.75	1.10	1.76	2.35
X All One Size		.84	1.09	1.47	1.96	2.50
Gaskets		.14	.14	.21	.28	.28
Reducers		.21	.21	.28	.42	.56
Connectors		.40	.42	.49	1.54	1.96
Unions		1.05	1.12	1.40	4.90	6.30

	Form 7	2"	2½"	3"	3½"	4"
A		\$2.32	\$5.46	\$ 6.50	\$10.60	\$11.70
B		3.65	5.46	7.90	9.10	16.65
C		3.40	6.24	8.10	11.70	14.30
CO-COV		4.45	10.27	16.38	16.38	16.38
E		3.00	5.46	6.50	10.60	11.70
F		For Special Form 6 Entrance Fittings See PL-13.				
LB-LF-LR-LR-LRB	Form 7	7.00	10.66	13.26	23.53	32.50
LB-LB-LR-LRB		3.50	6.50	8.45	13.65	15.60
L-LB-LR-LW		3.50	6.50	8.45	13.65	15.60
T All One Size		3.72	8.52	9.75	14.30	16.90
TA All One Size		5.53	6.50	9.75	14.30	16.90
TB-TL-TR		3.58	6.50	9.75	14.30	16.90
U-UB		4.20	7.80	10.15	16.38	18.75
X All One Size		4.90	7.80	13.00	16.90	20.80
Gaskets		.35	.52	.52	.65	.65
Reducers		.70	1.30	1.76	2.60	3.58
Connectors		3.01	.....	.....	.....	.....
Unions		8.10	.....	.....	.....	.....

COVERS

For Above

			$\frac{1}{8}$ "	$\frac{3}{8}$ "	1"	$1\frac{1}{2}$ "
Porcelain Covers with Holes.....		\$.14	\$.21	\$.35	\$.61	
Composition " " .....		.28	.42	.70	1.40	
	Blank.....	.42	.56	.84	1.54	
Porcelain " " For Drop Cord.....		.49	.66	.....	.....
	Weatherproof.....	.22	.35	.....	.....
Metal Covers Blank Sheet Steel.....		.12	.16	.33	.45	
	Cast Iron.....	.21	.31	.40	.70	
" " with $\frac{1}{8}$ " Nipple.....		.35	.59	.....	.....
" " " " $\frac{3}{8}$ " ".....		.33	.40	.54	.....
" " " " $\frac{1}{2}$ " ".....		.35	.42	.56	.....
		$\frac{1}{8}$ "	$\frac{3}{8}$ "	1"	$1\frac{1}{2}$ "	
Porcelain Covers with Holes.....		\$.67	\$.84	$\$1.12$	$\$1.26$	
Composition " "		1.55	1.68	.....	.....
	Blank.....	1.68	1.96	4.46	6.30	
Porcelain " " For Drop Cord.....		.....	.....	.....	.....
	Weatherproof.....	.....	.....	.....	.....
Metal Covers Blank Sheet Steel.....		.63	.70	1.05	1.12	
	Cast Iron.....	.98	1.26	1.61	1.75	
" " with $\frac{1}{8}$ " Nipple.....		.....	.....	.....	.....
" " " " $\frac{3}{8}$" ".....		.....	.....	.....	.....
" " " " $\frac{1}{2}$" ".....		.....	.....	.....	.....

RECEPTACLES & ROSETTES

For Above

Plug Receptacles		10 Amp. 2 Pole	250 Watt.	1 1/2"	3 3/4"	1 7/8"
..	15	..	125	..	\$.56	\$.83
..	20	..	125	..	..	.93
..	20	..	250	..	.77	.84
..	10	..	250	..	.84	..
..	15	..	3	125	..	.91
..	20	..	3	250	..	1.12
Lamp Receptacle 660 Watt with Shade Holder				..	.42	.49
Cord Rosette				..	.42	.49

FS SERIES FOR FLUSH DEVICES
Shallow Type Without Covers, Any Make

No. Gangs Single Gang	No. Pipe Outlets One Two	Series	3/4"	3/4"	1"
	One	FS-FSA	\$.91	\$1.05	\$1.19
	Two	FSC-FSL-FSR- FSLA-FSS-FSAA	1.05	1.26	1.54
"	Three	FSCA-FSCC- FSCST-FST	1.40	1.75	2.03
"	Four	FSX-FSCD	1.68	2.10	2.38
Two Gangs	One	FSS-FSA	1.68	1.82	1.96
"	Two	FSC-FSS	1.82	1.96	2.10
"	Three	FSD	2.03	2.17	2.31

FS SERIES FOR FLUSH DEVICES—Continued

No. Gangs	No. Pipe Outlets	Series	36"	36"	1"
2 Gang Tandem	One	FS	\$2.31	\$2.45	\$2.50
	Two	FSC	2.45	2.52	2.73
Three Gang	One	FS-FSA	2.73	2.82	2.87
" "	Two	FSC	2.73	2.86	2.87
" "	Four	FSD	2.73	3.01	3.32
Four Gang	One	FS-FSA	3.00	3.08	3.36
" "	Two	FS-FSSE	3.00	3.50	3.59
" "	Five	FSD	3.44	4.00	4.34

COVERS FOR FS FITTINGS

Description	Single	2	3	4
	Gang	Gang	Gang	Gang
Metal Cover for Flush Push Button Tumbler or Rotary Switches.....	\$.21	\$.42	\$.63	\$.84
Metal Cast Covers Guarded for Switches.....	.50	.91	1.40	1.96
Covers for Single Flush Receptacles.....	.35	.70	1.05	1.40
" " " " " Single " " Lift Cover.....	.42	.84	1.26	1.68
" " " " " with 1/2" Brass Nipple.....	.56	1.12	1.68	2.24
" " " " " For Pilot Lamp Rec. with Jewel.....	.63	1.26	1.89	2.52
" " " " " Iron Vaporproof with Operating Mechanism.....	1.40	2.80	4.20	5.60
" " " " " Brass.....	3.50	8.05	12.05	16.05
" " " " " Blank Cover Sheet Steel.....	1.14	2.28	3.56	4.84
" " " " " Porcelain Cover with Hat.....	.35	.70	1.05	1.40

COMBINATION COVERS FOR FS SERIES

2	Gang for One Switch and one Sgle. or Duplex Receptacle.....	\$.70
2	" " " " " Bull's Eye with Jewel	1.75
2	" " " " " One lift cover Receptacle	1.05

NOTE: Although our prices on conduit fittings apply to all makes we use Crouse Hinds' numbers and lists for convenience.

NOTE: Although our prices on conduit fittings apply to all makes we use Crouse-Hinds' numbers and lists for convenience.

G & H WITHOUT ADJUSTABLE BAR

Type Crown Hinds or Similar	5 Amp.			10 Amp.		
	1 1/2"	3 1/2"	1"	3 1/2"	1"	1"
GL.....	\$.56	\$.70	\$1.05	\$.70	\$.91	\$1.19
GL.....	.63	.77	1.12	.77	.98	1.28
GA-GLA-GT.....	.84	.98	1.33	.98	1.19	1.80
GT-GX-GXA.....	1.05	1.19	1.68	1.19	1.40	1.82
H.....	.42	.66	.91	.66	.77	1.08
HA.....	.63	.88	.98	.84	.88	1.12
HH.....	.70	.70	1.05	.70	.91	1.19
HHC.....	.84	.98	1.33	.98	1.19	1.50
HLA.....	.63	.77	1.12	.77	.98	1.28

G & H WITH ADJUSTABLE BAR

Type	5 Amp.			10 Amp.		
Crouse Hinds or Similar	$\frac{3}{4}$ "	$\frac{5}{8}$ "	1"	$\frac{3}{4}$ "	$\frac{5}{8}$ "	1"
G.....	\$.77	\$.91	\$ 1.26	\$.91	\$ 1.12	\$ 1.40
GL.....	.84	.98	1.33	.98	1.19	1.50
GA-GLA-GT.....	1.05	1.19	1.54	1.19	1.19	1.68
GTA-GX.....	1.26	1.40	1.89	1.40	1.61	2.03
GXA.....	1.50	1.71	2.17	1.71	1.82	2.31
HL.....	.63	.77	1.12	.77	.98	1.26
HA.....	.70	.84	1.19	.84	1.05	1.33
.....	.81	.91	1.12	.91	1.12	1.40
RHC.....	1.05	1.19	1.54	1.19	1.40	1.68
HLA.....	.84	.98	1.33	.98	1.19	1.50

COVERS FOR G & H SERIES

Description	For G & H Fittings Without Adjustable Bar						For G & H Fittings With Adjustable Bar 5 & 10						
	5 Amp.			10 Amp.			20 Amp.			Amp.			
	\$	¢		\$	¢		\$	¢		\$	¢		
Porcelain Cover with Wire Holes . . .	.28	.	35	.	35	.	56	.	21	.	50	.	50
Blank Sheet Steel Cover . . . . .	.21	.	28	.	35	.	35	.	14	.	50	.	50
" " Cast " " " " " " " " " "	.35	.	42	.	49	.	28	.	50	.	50	.	50
Sheet Steel with 1/4" Brass Nipple . . .	.35	.	42	.	49	.	28	.	50	.	50	.	50
" " " 3/8" " " " " " " " " " "	.42	.	49	.	56	.	35	.	50	.	50	.	50
" " " 1/2" " " " " " " " " " "	.50	.	56	.	63	.	42	.	50	.	50	.	50
" " " 3/4" " " " " " " " " " "	.56	.	63	.	70	.	50	.	50	.	50	.	50
Receptacle Covers No Shadeholder . .	.70	.	70	.	70	.	70	.	70	.	70	.	70
" " " With " " " " " " " " " "	1.12	.	00	.	00	.	00	.	00	.	00	.	00

DEVICES FOR G & H SERIES

Lamp Receptacles one piece with or without Shadeholder Groove.....	\$.35
" " " two " " without " "70
" " " " " without " "63
Cord Rosette Porcelain.....	.56
" " Composition.....	.76

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Apartments, hotels, office buildings . . . wherever there are discriminating tenants, construction specifications must call for the best materials available.

A-A wires are regularly chosen by architects, engineers, and contractors who know by experience that A-A quality assures dependable wiring circuits. There is an approved A-A wire manufactured for every type of monumental building . . . A-A Code, A-A Red (Intermediate), or A-A 30 Percent.

Edgewater Beach Apartments,
Chicago, wired with A-A Code.
Architect: Benjamin Marshall.
Electrical Contractor: White
City Electric Co.

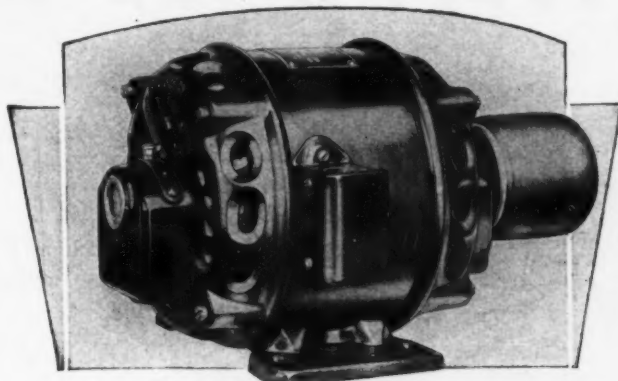


GENERAL CABLE CORPORATION

EXECUTIVE OFFICES: 420 LEXINGTON AVENUE, NEW YORK • OFFICES IN PRINCIPAL CITIES



THEY KEEP A-RUNNING



*1/4 Horse Power Century Type SC
Squirrel Cage Induction 3 and 2 Phase Motor*

RESIST MOISTURE

Moisture does not affect the continuous operation of Century Type SC Squirrel Cage Induction 3 and 2 Phase Motors. "They Keep a-Running" because the windings are thoroughly insulated and then saturated with insulating varnish. This preserves the insulation and effectively protects the windings against dampness.

These motors are liberally proportioned and well-balanced in design—no one characteristic is over developed at the expense of another... The bearings last. They are made of phosphor bronze, the best bearing material obtainable—the Century Wool-yarn System of Lubrication is used. Ball bearings can also be supplied.

Built in standard sizes from 1/4 to 250 horse power.

CENTURY ELECTRIC COMPANY

1806 PINE ST.

ST. LOUIS, MO.

40 U. S. and Canadian stock points and more than 75 outside thereof

SINGLE PHASE
THREE PHASE
AND DIRECT
CURRENT MOTORS

Century
MOTORS

MOTOR GENERA-
TOR SETS, ROTARY
CONVERTORS, FANS
AND VENTILATORS

FOR MORE THAN 26 YEARS AT ST. LOUIS

Sharp Tools!

KEPT SHARP ON BLACK & DECKER GRINDERS—increasing efficiency and effecting real economy in these days when maintenance costs must be kept at the lowest level.

Spot these grinders through your shop. Save time and insure quality as well as speed of production.



Black & Decker Electric Tool Grinders are available in sizes from 6" to 14" diameter wheels, the three shown above (6"-7"-10") having proven the most popular.

Pedestals may be obtained for all sizes except the 6".

Buy from your Distributor

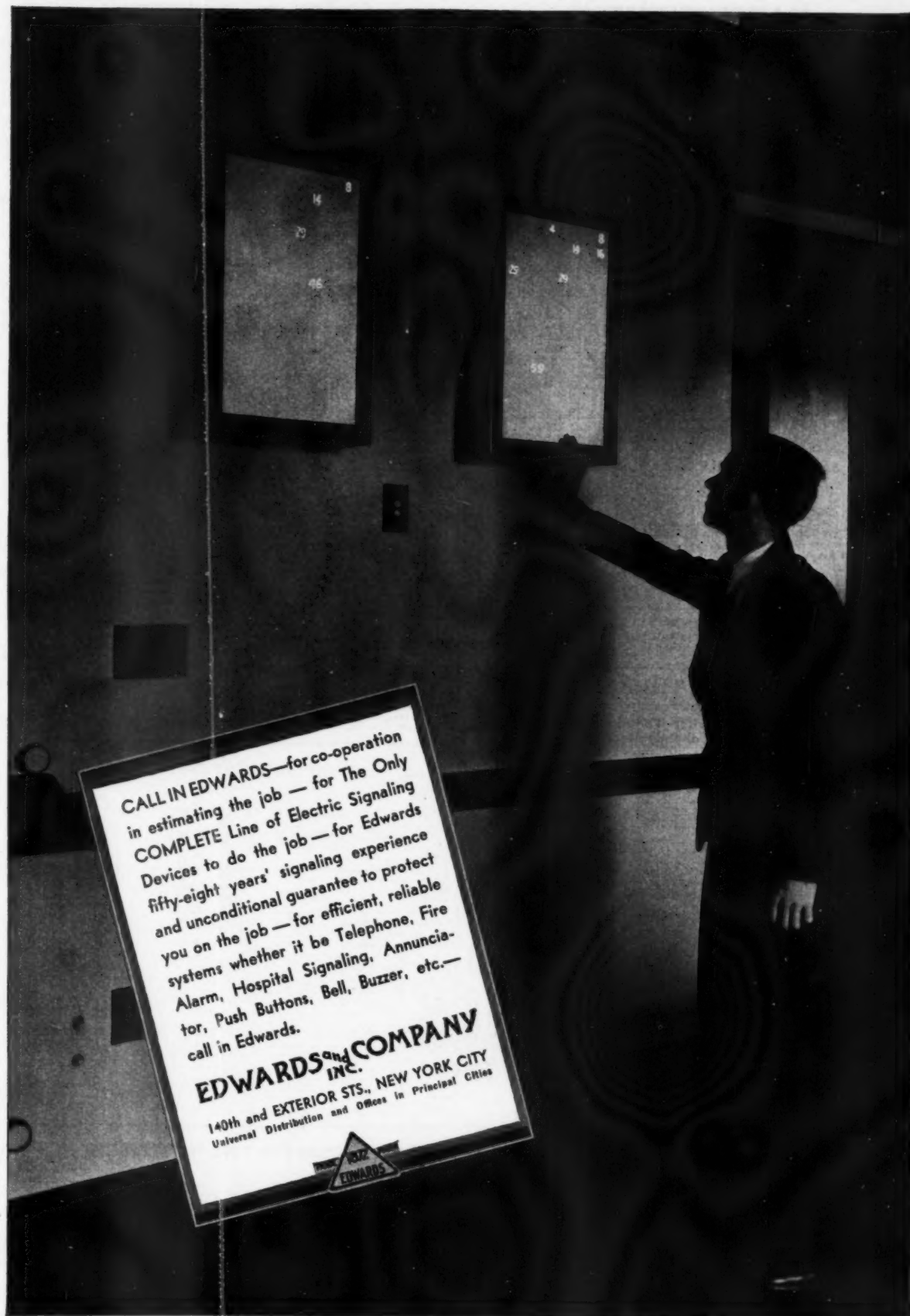
The BLACK & DECKER MFG. CO.

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COMPLETE Line of Electric Signaling
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fifty-eight years' signaling experience
and unconditional guarantee to protect
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systems whether it be Telephone, Fire
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EDWARDS and COMPANY
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Universal Distribution and Offices in Principal Cities

1927
EDWARDS

Fittings, Conduit

FITTINGS, THREADLESS

COVERS FOR ABOVE FITTINGS

DEVICES FOR ABOVE FITTINGS

TYPE FS FOR FLUSH DEVICES

Covers for Above

TYPE "O" FOR SNAP SWITCHES, ETC.

COVERS FOR TYPE "O" FITTINGS

UMI

FITTINGS, "ADAPTI"

ROUND "ADAPTI" BOXES

Series Numbers	Style	1/2"	3/4"	1"
No. 2900 to 2903	1 Back Outlet	\$.40	\$.46	\$.60
No. 3100 to 3105	" Side "	.40	.46	.60
No. 3100T & 3101T Thrdls.	" " "	.48	.55	.66
No. 3170 to 3175	" " "	.46	.53	.66
No. 3200 to 3205	2 " " "	.48	.55	.73
No. 3200T & 3201T Thrdls.	" " "	.60	.67	.93
No. 3270 to 3275	" " "	.60	.67	.93
No. 32170 to 32175	" " "	.33	.60	.85
No. 3300 to 3305	3 " " "	.64	.75	.98
No. 3300T to 3305T Thrdls.	" " "	.80	.92	1.05
No. 33170 to 33175	" " "	.70	.82	1.20
No. 3400 to 3405	4 " " "	.80	1.00	1.20
No. 3500 to 3505	2 " " "	.53	.60	.73
No. 3800 to 3805	" " "	.53	.60	.80
No. 3900 to 4105	3 " " "	.80	.93	1.05
No. 4800 to 5005	4 " " "	.93	1.05	1.32
Series Numbers	Style	1 1/2"	2"	3"
No. 2900 to 2903	1 Back Outlet	\$1.05	1.80	2.40
No. 3100 to 3105	" Side "	1.05	1.80	2.40
No. 3100T & 3101T Thrdls.	" " "	1.15	1.85	2.70
No. 3170 to 3175	" " "	1.25	2.11	2.70
No. 3200 to 3205	2 " " "	1.40	2.25	2.85
No. 3200T & 3201T Thrdls.	" " "	1.40	2.25	2.85
No. 3270 to 3275	" " "	1.34	2.20	2.80
No. 32170 to 32175	" " "	1.34	2.20	2.80
No. 3300 to 3305	3 " " "	1.60	2.65	3.00
No. 3300T to 3305T Thrdls.	" " "	1.70	2.70	3.05
No. 33170 to 33175	" " "	1.70	2.70	3.05
No. 3400 to 3405	4 " " "	1.85	2.85	3.30
No. 3500 to 3505	2 " " "	1.40	2.25	3.30
No. 3800 to 3805	" " "	1.40	2.25	3.30
No. 3900 to 4105	3 " " "	1.75	2.85	3.95
No. 4800 to 5005	4 " " "	1.90	3.50	4.65

PARTS For Above Boxes

Series No.	Description	1/2"	3/4"	1"
500-501-502	Base Only	\$.27	\$.27	\$.54
500X-501X	Extension Ring	.27	.27	.40
501A	Base Concealed to Expd.	.66	.66	.66
5050	" with Tapped Boss	.33	.33	.33
510 to 512	Base	.40	.40	.80
520 to 522	"	.27	.27	.52
30 to 35	Metal Side Plates	.14	.14	.20
40 to 42	Insulated Side Plates	.16	.16	.33
50 to 54	Armd. Flex. Side Plates	.33	.40	.53
60 to 65	Angle Outlet	.16	.22	.42
70 to 75	Elbow Outlet	.22	.29	.50
90 to 93	Connecting Outlet	.26	.33	.33
100 & 101	Straight for No. 500 Base	.16	.22	.33
110 to 113	" " No. 501 "	.26	.33	.42
120 to 125	" " No. 502 "	.46	.53	.66
130 to 135	" " No. 503 "	1.05	1.32	1.60
140 to 145	" " No. 504 "	2.65	3.05	3.45
300 & 301	Threadless Outlet	.20	.25	.33
310 & 311	"	.33	.40	.46
Series No.	Description	1 1/2"	2"	3"
500-501-502	Base Only	\$.54	\$1.08	\$1.08
500X-501X	Extension Ring	.40	.40	.40
501A	Base Concealed to Expd.	.66	.66	.66
5050	" with Tapped Boss	.33	.33	.33
510 to 512	Base	.80	1.60	1.60
520 to 522	"	.52	1.08	1.08
30 to 35	Metal Side Plates	.32	.38	.38
40 to 42	Insulated Side Plates	.33	.66	.66
50 to 54	Armd. Flex. Side Plates	.66	.92	1.05
60 to 65	Angle Outlet	.48	.92	1.05
70 to 75	Elbow Outlet	.55	1.00	1.12
90 to 93	Connecting Outlet	.40	.46	.46
100 & 101	Straight for No. 500 Base	.48	.92	1.05
110 to 113	" " No. 501 "	.80	1.05	1.05
120 to 125	" " No. 502 "	1.85	2.10	2.40
130 to 135	" " No. 503 "	3.85	4.25	4.65
140 to 145	" " No. 504 "	3.85	4.25	4.65
300 & 301	Threadless Outlet	.40	.46	.46
310 & 311	"	.46	.52	.52

COVERS For Round Adapti Boxes

Numbers	Description	Price
1	Porcelain One Hole Cover	\$.18
2	Metal For Devices	.30
3	Porcelain One Hole Cover	.30
4	Porcelain	.22
5 & 6	Porcelain with 1/4 Male or Female Nipple	.37
7 & 8	" " 1/2 " "	.52
9 & 10	Malleable with 1/4 Male or Female Nipple	.30
11 & 12	" " 1/2 " "	.37

NOTE: For "Adapti" Entrance Fittings See Page PL-13.

"GROUNDULET" FITTINGS
Crouse Hinds—Appleton & Similar
Type GCA

Fitting No.	Description	Price
GCA-12 For 1/2" Conduit Without Soldering Lug		\$.78
" -172 " " " with		.84

Type GCD

With Angle Adjustment	1/2" One Strap 3/4" Two Straps	1" Three Straps
GC-12 Fitting without Lug	\$.92	\$1.70
GC-172-22-32 with	.96	\$2.95

Type GCE & GCEE

With Strap, Clamp Terminal and Lug	Size of Water Pipe 1/2" to 2 1/2"	1/2" to 4 1/2"	1/2" to 6 1/2"
With One Strap for 1/2" Conduit	\$1.60	\$1.85	\$2.20
" Two " " 3/4" "	3.00	3.45	4.20
" Three " " 1" "	4.45	5.10	6.20

Type GCE

With Threaded Plug Terminal	Price
GCE-142 For 1/2" Conduit without Lug	\$.91
GCE-242 " " " with Lug	1.05
GCE-342 " 1" " with Lug	1.20

Type GC

For Open Ground Wire

GC-92 Cast Brass with No. 4 Lug & One Strap	\$.73
GC-922 " " " " 00 Lug & Two Straps	1.45

GC BRASS BUSHINGS For Ground Fittings

Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"
Without Screw or Lug	\$.10	.13	.20	.24	.31	.46	\$.84
With Screw & Lug	.20	.24	.31	.32	.40	.61	1.25

TERMINALS, LUGS, JUMPERS, CLAMPS, ETC.

	Price
Brass Stud Double End Fits Groundulet Bushings 1/2" to 6" GC52	\$.20
Conduit End Terminal—1/2" GCE1—.37 3/4" GC2—.52 GCE3	.65
Grounding Strap GC100 Per Foot	.25
Jumper Strap GC110 Each	.15
" Cable GC800 Per Foot	.18
" For Bonding Conduit 8" Long No. 808 Per Foot	.40
" " " 12" " " 812 " "	.53
Soldering Clips for Bushings 1/2" to 1 1/2" .05 2" to 6" .09	.09
" Lugs GCA130 For GCA and GCD Fittings	.06
" " Brass for 1/2" Conduit No. 130—.20 3/4" or 1" No. 160	.30
" " " Copper for Bushings 1/2" to 2"—.03 2 1/2" to 6" .10	.10
Strap Clamp Terminal for Water Pipe 1/2" to 2 1/2"—GCE-012	1.05
" " " " 4 1/2"—GCE-014	1.30
" " " " 6 1/2"—GCE-016	1.65
" " " Steel GC101—.35 Brass GC102	.65
Threaded Plug Terminals Iron GCE042—.36 Brass .082	.72
Water Meter Shunt No. GC192	1.80

FITTINGS OR BOX CONNECTORS,
ARMORED CABLE

For BX or Armored Cable	Size of K. O.	Price Each
Standard Squeeze Connector 1/2"-1 1/2"	1/2"	\$.06
" Set Screw Connector 1/2"-1 1/2"	1/2"	.06
" Slip In Connector 1/2"-1 1/2"	1/2"	.06
" Duplex Connector 1/2"-1 1/2"	1/2"	.18

STRAIGHT

BOX	Squeeze or Tangent Type	Price
CONNECTORS	1/2"	.20
	3/4"	.20
	1"	.30
	1 1/2"	.55
	2"	.65
	2 1/2"	.85
	3"	1.25

90 DEGREE

ANGLE BOX CONNECTOR	Squeeze or Tangent Type	Price
	1/2"	.35
	3/4"	.40
	1"	.75
	1 1/2"	1.00
	2"	1.25

45 DEGREE

ANGLE BOX CONNECTOR	Squeeze or Tangent Type	Price
	1/2"	.35
	3/4"	.45
	1"	.80
	1 1/2"	1.00
	2"	1.25

PANEL BOX

ADAPTOR FOR CONVERTING ANY CONNECTOR INTO A PANEL CONNECTOR	Price
1/2"	.35
3/4"	.40
1"	.61
1 1/2"	.80
2"	1.10
2 1/2"	1.65
3"	2.20

COUPLINGS

FOR FLEXIBLE STEEL CONDUIT	For 1/2" Conduit	Price
	1/2"	.36
	3/4"	.38
	1"	.42
	1 1/2"	.54
	2"	.70
	2 1/2"	.90
	3"	1.10
	3 1/2"	1.60

COUPLINGS FOR

RIGID TO FLEXIBLE CONDUIT	For 1/2" Conduit	Price
	1/2"	.36
	3/4"	.48
	1"	.57
	1 1/2"	.80
	2"	1.00
	2 1/2"	1.50

Bushings or Ferrules—Brass. .02

FITTINGS FOR "OVALFLEX" ARMORED CABLE

Number	Description	Price
2150-57-60-61	Straps—Fasteners & Bushings	\$.02
2159	Toggle with Wire Loop	.03
2176-2180-2154	Set Screw Connector	.15
2179-2181	Special Box Connector	.10
2155-2156	90 Degree Box Connector	.31
412-413	Connector for Ovalflex to Metal Molding	.35
9080-S	Squeeze Connector	.10

LAMP GUARDS

Loxon

1 Key with each dozen Guards—Extra Keys 10c each

For Lamps	Fits Socket	McGill Loxon Nos.	Price Each
New Mazda	Brass or W. P.	1420-1420A-1420B	\$0.60
15-25-40 Watt	Brass or W. P.	1425-1427A-1427B	.60
50-60 Watt	Brass or W. P.	1426-1428A-1428B	.60
100 Watt	Brass or W. P.	2443	.80
150 Watt	Brass or W. P.	2444-2446A-2446B	.85
200 Watt	Brass or W. P.	2447	.95
200 Old Style	Brass	2447A-2447B	1.00
200 Old Style	Weatherproof	2447A-2447B	1.00
Reflector Type—15 to 60 Watt for Brass Sockets #1400-1443			\$0.80
Reflector Type—15 to 60 Watt for Weatherproof Sockets #1401-1444A&B			.90

Sterling DISPLAY LIGHTING



Sterling Reflectors
for SHOW WINDOW
and DISPLAY CASE
Lighting are unequalled
for efficiency, service,
and satisfaction.



No. 253

Sterling
SHOW WINDOW
REFLECTOR

For 150-200 Watt Mazda
"C" Lamps.



No. 254

Sterling
SHOW WINDOW
REFLECTOR

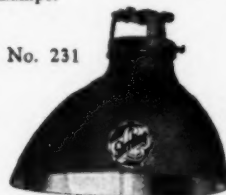
For 150 Watt Mazda "C"
Lamps.



No. 251

Sterling
SHOW WINDOW
REFLECTOR

For 150-200 Watt Mazda
"C" Lamps.



No. 231

Sterling
SHOW WINDOW
REFLECTOR

For 100 Watt Type "A"
Mazda Lamps.



No. 221

Sterling
SHOW WINDOW
REFLECTOR

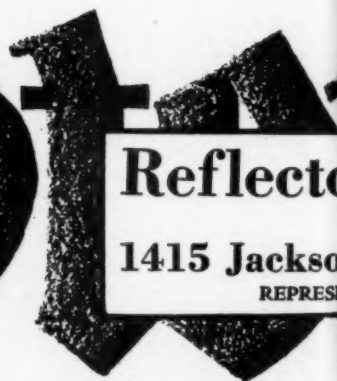
For 75 Watt Mazda "C" and
100 Watt Mazda "A" Lamps.



No. 403

Sterling
SHOW WINDOW
REFLECTOR

For 300 or 500 Watt Mazda
"C" Lamps.



Reflectors

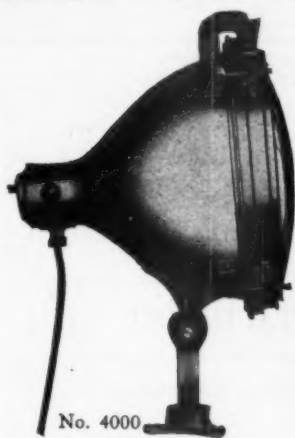
1415 Jackson St.,
REPRESENT ALL P

GUARANTEED FOR

Sterling FLOOD LIGHTING



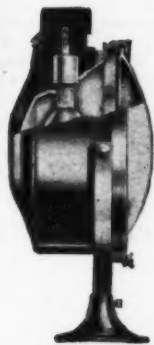
Sterling Flood-Lighting Equipment is a COMPLETE line made to meet all requirements for efficient interior and exterior Flood-Lighting.



No. 4000

Sterling FLOOD-O-LITE

For 300-500 Watt PS Lamps. Beam spread 6 to 25 degrees.



No. 5240

Sterling FLOOD-O-LITE

Adjustable for 300 to 1000 Watt Type "C" PS Lamps. Beam control of from 6 to 90 degrees.



No. 7000

Sterling FLOOD-O-LITE

Adjustable from 500 to 1000 Watt Type "C" PS Lamps. Beam spread of from 12 to 90 degrees. Equipped with azimuth and elevation position locks.



No. 3000

Sterling FLOOD-O-LITE

For 250 and 400 Watt Type "C" G-30 Lamps. Beam control of from 6 to 80 degrees.



No. 4010

**Sterling
FLOOD-O-LITE SENIOR**
For interior Flood and Spot Lighting. Utilizes 300-500 Watt PS Lamps.

luminating Co.

and Engineers
sonard, Chicago, U. S. A.
RESENTAL PRINCIPAL CITIES

"Lifetime of Service"

3 Wire	OVALDUCT	Per Foot \$.17
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OVALDUCT FITTINGS		
No.	Description	Price Each
24-CQ	Extension box cover for 4" outlet boxes.	\$.45
401	Box Connector with 1/4" Locknut.	.25
2133	Squeeze Type Coupling 1 1/4" long.	.15
2134	90 Degree Internal Elbow.	.35
2135	45 " Flat	.26
2136	One piece 90 degree elbow.	.60
2156	90 " Box Connector.	.30
2159	Wire Toggle Fastener.	.10
2161	Strap Fastener.	.02
2181	Connector Ovalduct to Oval Knockout.	.10
2662	Outlet Box 4 x 3 1/2	.20
2663	Extension Ring for Boxes.	.20
2665	Outlet Box 4 x 3 1/2 with Fixture Stud.	.28
2662	" " 3 1/2 x 3 1/2	.20
2665	" " 3 1/2 x 3 1/2 with Fixture Stud.	.26
4170-S1	Sectional Switch Box 4 x 1 1/2 x 1.	.30
4172-S1	Spacer for above box.	.30

MOLDING, WIREMOLD

MOLDING			
No. 500 2-Wire,	price per ft.		\$.10
700 4-Wire,	" " "		.12
1000 Master Size,	" " "		.23

FITTINGS FOR No. 500			FITTINGS FOR No. 700		
Number	Description	Price	Number	Description	Price
502	Bushing.	\$0.04	5730	6 3/4" Fixture Box.	\$0.95
504	Supporting Strap.	.04	5730A	6 3/4" Extension "	.95
506	Connecting Cover.	.04	5744	Single Deep Box.	.85
511-12	45 & 90 Deg. Elbow.	.22	5744-2	2 Gang "	1.20
515	Tee Plain.	.36	5745	Combination "	.70
516	Cross Plain.	.38	5747	Single Shallow Box.	.75
517	Internal Elbow.	.24	5747-2	2 Gang "	1.05
518	External "	.22	5747-3	3 " "	1.15
519	Corner Box.	.38	5748	Single Surface "	.85
521	1 Piece Rosette.	.36	5748-2	2 Gang "	1.15
523	1/2" Fixture Rosette.	.75	5748-3	3 " "	1.20
524	3/4" "	.70	5748S	Shallow " Rec."	.65
525	Receptacle Base.	.80	5749	Switch & Recep.	1.00
526	Keyless Receptacle.	.95	5750	Push Switch Box.	1.05
527	Attachment Plug.	1.00	5751	Single Adp. Plate.	.70
532-23	2 1/2 x 3 1/2" Outlet Box.	.45	5752	2 Gang "	1.25
588	Operwork Coupling.	.36	5753	3 " "	1.30
599	Moulding Connector.	.08	5760	Blank Extension Box.	.95

FITTINGS FOR No. 700			FITTINGS FOR No. 1000		
Number	Description	Price	Number	Description	Price
5701	Coupling.	\$0.04	5783	1 1/2" Elbow Box Conn.	.36
5702	Bushing.	.04	5784	1 1/2" Pipe Coupl.	.36
5703	Clip.	.06	5785	Comb. Connector.	.28
704	1 & 2 Hole Strap.	.06	5786	Adj. Offset Conn.	.40
706	Connection Cover.	.04	5788	Openwork Connector.	.45
5707	Multiple Strap.	.10			
5708	Fixture Hook.	.22			
5709	Ground Clamp.	.12			
5711-12	Elbows 45 & 90 Deg.	.22			
5713	Tee.	.36			
5717	Internal Elbow.	.25	1001	Coupling.	\$0.06
5717A	Elbow Pull Box.	.50	1002	Bushing.	.04
5718	External Elbow.	.22	1003	Clip.	.06
5719	Corner Box.	.45	1005	One Hole Strap.	.08
5720	Narrow Fitting.	.55	1008	Hanger Assembly.	.90
5720A	Show Case Outlet.	.45	1008A	Hanger Clamp.	.18
5721	1 Piece Rosette.	.35	1009	Ground "	.20
5724	Comb.	.70	1011	90 Deg. Flat Elbow.	.40
5725	Receptacle Base.	.80	1013	Adj. Elbow.	.40
5726	Keyless Receptacle.	.95	1017	Internal Elbow.	.40
5727	Plug Receptacle.	1.00	1018	External "	.35
5728	Utility Box.	.40	1020	Keyless Receptacle.	.90
5729	" Cond. Type.	.40	1020A	Angle	1.40
5730	Contact Block.	.26	1020B	Blank or Outlet Box.	.50
5731	Blank Cover.	.15	1028	Utility Box.	.70
5732-3	2 1/2 x 3 1/2" Outlet Box.	.45	1035	Distribution Box.	1.10
5734	Closed Extension "	.65	1039	6 3/4" Fixture "	.90
5735	Distribution Box.	.75	1048	Switch & Recep. Box.	1.00
5736	Blank Cover.	.16	1082	Pipe Coupling.	.60
5737	4 1/2" Extension Box.	.65	1085	Comb. Connector.	.35
5738	4 1/2" Fixture Box.	.65	1086	Offset Connector.	.70
5738D	Diple Thru Hook Conn.	1.30	1087	Kick Plate.	.32
5738E	Stamped Hook	.15	1089	Reducing Connector.	.15
	Canopy.	.65	1000F	Flex. Fitting 18"	1.75

LEWIS METER AND SWITCH CABINETS

CLASS A			MAIN FUSE ACCESSIBLE		
Amp.	Volts	Wire	Fuse	Neutral	Numbers
30	125-250	3	2	Solid.	M7311-ML7311.
30	125-250	3	2	"	M7311M-ML7311M.
30	125	2	1	"	M7211-ML7211.
30	125	2	1	"	M7211M-ML7211M.
30	125	2	2	Fused.	M7211D-ML7211D.
60	125-250	3	2	Solid.	M7312-ML7312.
60	125-250	3	2	"	M7312M-ML7312M.
60	125	2	1	"	M7212-ML7212.
60	125	2	1	"	M7212M-ML7212M.
60	125	2	2	Fused.	M7212D-ML7212D.
CLASS B			SEALED MAIN FUSES		
30	125	2	1	Solid.	M5211 or ML5211.
30	125-250	3	2	"	M5311 " ML5311.
30	125	2	2	Fused.	M 211 " ML 211.
30	125-250	3	2	Unfused.	M 311 " ML 311.
30	250	2	2	Fused.	M 221 " ML 221.
60	250	2	2	"	M 222 " ML 222.
30	125-250	3	2	Unfused.	M 321 " ML 321.
30	125-250	3	2	Solid.	M 321SN or ML 321SN.
60	125-250	3	2	"	M 322 or ML 322.

N-SUNDRIES

PIPE NIPPLES									
Made from Galvanized Wrought Iron Pipe									
Length		Size of Nipples and Price Each							
Size	Size	Size	Size	Size	Size	Size	Size	Size	Size
1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"
6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"
7"	7"	7"	7"	7"	7"	7"	7"	7"	7"
7 1/2"	7 1/2"	7 1/2"	7 1/2"	7 1/2"	7 1/2"	7 1/2"	7 1/2"	7 1/2"	7 1/2"
8"	8"	8"	8"	8"	8"	8"	8"	8"	8"
8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"	8 1/2"
9"	9"	9"	9"	9"	9"	9"	9"	9"	9"
9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"
10"	10"	10"	10"	10"	10"	10"	10"	10"	10"

NOTE RE NIPPLES—Above prices cover nipples made from ordinary Galvanized pipe as used by plumbers. If local rules call for nipples to be made from genuine conduit add the following:
For nipples made from genuine black conduit add 30% to above prices.
For nipples made from genuine Galvanized conduit add 40% to above prices.

CHASE NIPPLES & COUPLINGS

Size	1/4"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Chase Nipples.. each	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10
Couplings "	.12	.12	.12	.12	.12	.12	.12	.12	.12

For Erickson Couplings, see Page PL-8.

CHASE MALE REDUCERS CHASE FEMALE ENLARGERS

T & B or Similar									
1/4" to 1/2" Reducer, each	\$.20	1/2" to 3/4" Enlargers, each	\$.20	3/4" to 1" "	.25	1" to 1 1/4" "	.30	1 1/4" to 1 1/2" "	.35
1 1/2" to 1 3/4" "	.40	1 3/4" to 2" "	.45	2" to 2 1/2" "	.50	2 1/2" to 3" "	.55	3" to 3 1/2" "	.60

NAILS Insulated

Millonite Insulated Nails, per dozen	\$.05
Leather Nail Heads,	.05
Staples Insulated,	.05

PLUGS, ATTACHMENT

ATTACHMENT PLUGS COMPLETE

	Price
"Pony" Composition.....	\$0.15
Standard	.20
"Genuine "Bakelite".....	.25
Polarized Standard Comp. Plug.....	.30
Large Size Double T Slot Comp. Porcelain.....	.55
Weatherproof One Piece Comp.....	.50
Benjamin #903 Swivel Plug.....	.40
Pony Body Only \$0.10	Standard Body..\$0.15
	Large Body.....\$0.35

10 AMP.—CAPS ONLY For Attachment Plugs

"Pony" Cap Composition.....	\$0.10
"Standard" Cap	.10
"Bakelite" Cap	.15
Large Size Cap Composition.....	.25
Plug With Extension Knob.....	.20
Soft Rubber Cap.....	.25
"Standard" Cord Grip Cap.....	.30
"Steel Covered Cap.....	.15
"Brass " Cord Grip.....	.40
"Steel " Cord Grip.....	.45
Disappearing Door Comp. Cap.....	.75
"Brass Cov. Cap.....	1.00
"Standard" Brass Cov. Finger Grip.....	.60
"Knostrain" Comp. Cap.....	.45
"Brass Cov. Knostrain.....	.75
"Comp. Fusible Cap.....	.50
Polarized 2 Wire Comp.....	.25
"2 " Brass Cov. Cap.....	.45
"2 " Steel ".....	.30
"2 " Cord Grip ".....	.45

20 AMP. CAPS For Polarized Devices

2 Wire Brass Covered Cap.....	\$0.85
3 " "	1.00
2 " Steel Covered Cord Grip Cap.....	1.10
3 " "	1.20

30 & 40 AMP. CAPS For Polarized Devices

30 Amp. 2 Wire Porcelain Cap.....	\$1.45
30 " 2 " Steel Cov. Cord Grip.....	1.80
30 " 3 " Porcelain.....	1.55
30 " 3 " Steel Cov. ".....	2.20
40 " 3 " Str. Cap Ground. C. G.....	2.15

Flasher Plugs

Diamond Flasher Button.....	\$0.60	No. 125 Speeddoodle Plugs.....	\$2.50
"Propp" #530 Flasher Button.....	.50	No. 164 ".....	.60
"Rodale" 110 Volt " Plug.....	.50	No. 161 ".....	.80
220 Volt " ".....	.65	No. 165 ".....	.90

Plugs, Appliance

Plates & Plugs

PLUGS, APPLIANCE

Make	No.	Description	Price
American Beauty	802	Plug Complete for Small Irons.....	\$0.40
	806	" " " " Large.....	1.25
	807	" " " " Toasters & Stoves.....	.20
Heaver	F-1	"Gripall" Super-Type Adjustable Cont.....	.45
"Gripall" & "Suitzall"	F-4	" " " " Nickel Alloy.....	.55
	F-5	" " " " Armored Casing.....	.55
	F-6	" " " " Nkl. Alloy Cont.....	.60
	F-7	" " " " Adj. Cont. Bakelite.....	.50
	F-22	"Suitzall" Heater Plug—Full Size.....	.20
	F-31	Standard " " Single Sided Cont.....	.15
	F-32	Heater Plug Double Sided Contacts.....	.20
	F-33	Armored Casing (F-32 Type Armored).....	.25
	F-34	Medium Heater Plug—Bakelite.....	.25
	F-36	Small Heater Plug—Black.....	.20
	G-1	"Gripall" Heater Switch Plug Adj. Cont.....	.80
	G-2	"Gripall" Heater Switch Plug Nickel Alloy Contacts.....	.90
	G-21	Competitive Push Button Type.....	.45
	G-22	New Toggle Type.....	.45
Betsy Ross	126	Shut Off Switch Plug.....	.40
	125	Safeguard Automatic Heat Control Plug.....	1.40
	123	All Appliance Plug.....	.15
Bryant	668	Universal Appliance Plug with Switch.....	.85
	669	Switchless.....	.50
	732	Appliance Plug with Indicating Switch.....	.60
Cutler-Hammer	7051	Appliance Plug with Switch.....	.60
G. E.	2602	Armored Heater Plug No Switch.....	.25
	2633	Large Heater Plug.....	.20
	2642	Switch " " with " ".....	.45
	2699	Small " " No " ".....	.25
	2826	"Handy Pull" Heater Plug.....	.35
Hemco	H250	Switchless Appliance Plug.....	.50
	H260	Switch.....	.75
Hotpoint	CD6P1	Iron Plug No Switch.....	.45
	CD6P1	" " " " Armored.....	.60
	CD7P1	" " " " with " ".....	1.00
Kool-Pull (Noark)	8087	Appliance Plug—No Switch.....	.75
	8089	" " " " with " ".....	1.00
Propp	5	One 4-All Appliance Plug—No Switch.....	.30
	52	Iron Plug with Switch.....	.50
	55	Standard Iron Plug—No Switch.....	.20
	56	Armored.....	.30
Reynolite	500	Heater Plug.....	.40
	510	Switch Heater Plug.....	.75
Rodale	P-21	Heater Plug No Switch Cold Molded.....	.20
	P-29	" " " " Armored.....	.25
	450	Fitsall Heater Plug—No Switch.....	.45
	610	Bakelite " " Armored Heater Plug—No Switch.....	.25
	615	" " " " Armored.....	.35
	850	Iron Plug with Switch.....	.60
	800	" " " " Armored.....	.85
Simplex	890	Armored Plug—No Switch.....	.75
	990	Deluxe Chromplate Plug.....	1.00
Sunbeam	A-85	Heater Plug.....	1.50
Torrid	B-070	Automatic Heat Control Plug.....	1.00
	B-080	Safety.....	1.00
Waage	.....	3 & 4 Heat Plug Only.....	.50
Westinghouse	299423	Appliance Plug—No Switch.....	.75
	373656	" " " " With " ".....	1.00

PANEL BOARDS OR FUSE CABINETS

BULLDOG FUSENTERS

No.	Description	2	4	6	8	12
		Circt.	Circt.	Circt.	Circt.	Circt.
CBS	Black Finish with inside shield	\$1.85	\$ 2.35	\$ 3.95	\$ 7.10	\$10.40
BOS	" " " " Black Finish with-out Shield	1.70	2.20	.....	.....	.....
BF	Flush " " " " Luminized Finish	2.50	3.75	5.40	8.80	11.80
BBF	" " " " " " Black Finish	2.00	2.75	4.75	.....	.....
BSF	" " " " " " Lum. Finish with Toggle Switches	.....	6.65	10.00	13.30	20.00
BSS	" " " " " " Lum. Finish with one 30 A. Saftofuse	.....	20.60	22.00	32.00	35.25
BSS	" " " " " " Lum. Finish with one 60 A. Saftofuse	.....	21.60	22.50	32.35	35.65
BKF	" " " " " " Lum. Finish Combined Fusenter & Pull Box	.....	6.65	10.00	15.00	20.00
Combinations—For Resale Prices on all other Fusenter Combinations deduct 17% from Bulldog Co's List Prices.						

All-Steel-Equip.Co., FUSE CABS

Style & No.	Description	2	4	6	8	12
		Circt.	Circt.	Circt.	Circt.	Circt.
C-702-4-6	Surface Small Type	\$1.75	\$2.45	\$ 3.75	.....	.....
C-902-4-6	Flush Small Type	2.20	2.85	4.95	.....	.....
Series D	Surface Type Sgl. Fuse	.....	.....	.....	.....	.....
3004 to 3074	Not for Branch Switch	.....	3.20	5.10	\$ 7.50	\$10.10
	Flush Type	.....	.....	.....	.....	.....
3034 to 3094	Not for Branch Switch	.....	3.75	5.60	9.00	12.10
	Surface Type Dbl. Fuse	.....	.....	.....	.....	.....
4002 to 4012	Not for Branch Switch	.....	3.20	5.10	10.10	23.00
	Flush Type Dble. Fuse	.....	.....	.....	.....	.....
4022 to 4032	Not for Branch Switch	.....	3.75	9.00	12.10	27.00
	Flush or Surface-Sgle.	.....	.....	.....	.....	.....
Series DS	Fuse Trims for Tog. Sw.	.....	6.90	9.25	13.80	21.00
3300 & 4300	Flush or Surface-Dble.	.....	.....	.....	.....	.....
3500 & 4500	Fuse Trims for Tog. Sw.	.....	6.90	9.25	21.00	34.50
	Flush or Surface-Dble.	.....	.....	.....	.....	.....

G. E. or TRUMBULL

Residence Panel Boards

Surface or Flush Mounting	4	6	8	10	12	14
Single No. 3104 to 3212	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
Flush Mtg.	.....	.....	.....	.....	.....	.....
Or Fusing 2906 to 2912	.....	.....	.....	.....	.....	.....
Surface Mtg.	\$2.80	\$ 4.55	\$ 9.65	\$11.25	\$13.00	\$15.50
Double No. 3404 to 3412	.....	.....	.....	.....	.....	.....
Flush Mtg.	.....	.....	.....	.....	.....	.....
Or Fusing 2704 to 2712	.....	.....	.....	.....	.....	.....
Surface Mtg.	9.10	12.40	18.15	23.10	26.40	.....

Electrical Contracting, September, 1930

CUTLER-HAMMER (T-V)

Fuse Panels—Surface or Flush Mounting

Circuits	2	4	6	8	10	12
	Cir.	Cir.	Cir.	Cir.	Cir.	Cir.
Black Finish Series 4355 & 4356.....	\$ 1.75	\$ 2.40	\$ 3.40	\$ 4.30	\$ 5.20	\$ 6.10
Aluminum Finish Series 4355 & 4356.....	2.25	3.20	4.20	5.20	6.20	7.20
Circuits	8	10	12	14	16	18
Black Finish Series 4355 & 4356.....	\$ 7.60	\$ 9.10	\$ 10.60	\$ 12.10	\$ 13.60	\$ 15.10
Aluminum Finish Series 4355 & 4356.....	7.95	10.00	12.00	14.00	16.00	18.00

KILLARK

Standard Flush Type Panels	2	4	6	8	10	12
	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
Series KRP—2 to 12 Inclusive.....	\$2.00	\$2.90	\$4.75	\$6.50	\$8.50	\$10.75

SQUARE D

Fuse Cabinets

Series 37000 to 39000	2	4	6	8	10	12
	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
Flush Series 37000 Black.....	\$1.85	\$2.50	\$4.50	\$7.90	\$9.50	\$11.15
" " 37000 Aluminum.....	2.35	3.35	5.10	8.30	10.00	11.15
Surface Series 39000 lack.....	1.85	2.50	4.50	7.90	9.50	11.15
NOTE: 2 & 4 Circuit Flush Type arranged for mounting direct to front side of studding with channels for lathe ends, each.....						
						\$0.20

Combination Fuse Cabinets

60 Amp. Fuse Break and 30 Amp. Circuits	2	4	6	8	10	12
	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
Flask Mounting Aluminum.....	\$7.45	\$12.40	\$14.00	\$14.85	\$23.00	\$23.00
Surface Black.....	6.45	10.75	11.55	12.40	20.65	20.65

WADSWORTH Dead Front Fuse Cabinets

Surface Mtg. Single Fusing.....	2	4	6	8	10	12
	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
Flask Mtg.—Single Fusing.....	\$2.30	\$3.00	\$4.85	\$5.75	\$7.55	\$11.55
Flush Type for Tgle Sw.....	2.85	3.80	6.10	7.55	10.20	12.00
			6.85	11.10	13.75	16.40
						19.85

WESTINGHOUSE Junior Residence Type

Galvanized or Gray Box Junior Residence Panels	2	4	6	8	10	12
	Circt.	Circt.	Circt.	Circt.	Circt.	Circt.
No. K-64012-21 & 64052-61.....	\$1.65	\$2.50	\$ 4.50	\$ 6.60	\$ 7.85	\$9.90
Junior Branch Fuse Attach No. K-62398 & 62399.....	1.75	2.55	.....	.....	.....	.....
Jun or Building Panels for Toggle Switches No. K-64034-42 & 64074-81.....	.....	6.60	9.90	13.20	16.50	19.80

P-SUNDRIES

RUNNING THREAD, PIPE

Price per Foot.....	1/4"	3/8"	1/2"	3/4"	1"
	\$.25	\$.30	\$.35	\$.45	\$.55

SOLDERING PASTE

(Also on Page PL-25.)

Make	2 Oz. Cans	2 Oz. Tubes	4 Oz. Cans	Half Pound Cans	One Pound Cans
Allen.....	\$.25	\$.40	\$.50	\$.90	\$1.50
Burnley.....	.20	.....	.30	.40	.70
Crescent.....	.25	.....	.40	.65	1.00
G. E.....	.25	.....	.....	.90	1.50
Highland.....	.45	.....	.....	.90	1.50
Nokorode.....	.25	.....	.....	.90	1.50
Star.....	.25	.....	.40	.65	1.00

PAINT & VARNISH, Insulating

Make	Per Pint	Per Quart	Per Half Gallon	Per Gallon
Armalcac Insulating Compound.....	\$0.50	\$0.75	\$1.25	\$2.50
Ajax Varnish No. 25.....	.40	.65	1.00	2.00
Enamelac Insulating Varnish.....	.40	.70	1.25	2.25
G. E. Black Baking or Air Drying.....	.50	.75	1.25	2.25
G. E. Clear Baking or Air Drying.....	.50	.75	1.25	2.50
Mineralac Insulating Compound.....	.40	.75	1.50	3.00
P. & B. No. 2 Paint.....	.40	.75	1.50	3.00
Pothead Compound, per Pound.....	.....	.....	.....	.55

CONDUIT WOOD PLUGS

Price Each.....	1/4"	3/8"	1/2"	3/4"	1"	2"
	\$.02	\$.03	\$.05	\$.10	\$.16	\$.20

For Pipe Straps, see Page PL-25. For Solder, Sticks, etc., Page PL-25.

PLATES & PLUGS, RECEPTACLE

PLATES—For Flush Receptacles

	Composition	.040 Gauge	.060 Gauge
		Lacquer B. Brass	Lacquer B. Brass
Single or Duplex Plate.....	\$0.20	\$0.15	\$0.20
Lift Cover Plate 1 Outlet.....	.30	.35	.45
Radio Plates—Sgle. or Duplex.....	.15	.20	.30
Telephone " One Outlet.....	.20	.35	.45
" Double.....	.20	.45	.50
Disappearing Door Plate Sgle.....	.....	.....	1.15
" Duplex.....	.....	.....	.75
Chapman Receptacle.....	.20	.25	.30
Blank Plates One Gang.....	.20	.25	.30
Bull's Eye and Single Plate.....	.60	.70	.75
" and 1 Switch Comb.....	.70	.....	.75
" and 1 Recep.....	.50	.....	.65
Switch and Sgle. or Duplex Recep.....	.40	.50	.60
Steel Plates for 30 and 40 Amp. Polarized Receptacles.....	.....	.....	.75
Solid Brass Plates 30 and 40 Amp.....	.....	.....	1.50
Screwless Plates Bakelite for Hubbell Receptacles.....	.....	.....	.55
Porcelain Enameled Plates for Sgle. or Duplex Receptacles.....	.....	.....	.25
Mirror Glass Plates for Single Receptacle.....	.....	.....	1.00
DeLux Metal Plates for Single or Duplex Receptacles.....	.....	.....	.90
DeLux Wood Inlaid Plates for Single or Duplex Receptacles.....	.....	.....	2.35

Blades

	Blades	Price
10 Amp. Pony Composition Cap.....		\$0.10
10 " " Standard.....		.10
10 " " Cap With Extension Knob.....		.20
10 " " Brass Covered Cap.....		.40
10 " " Steel.....		.15
10 " " Cord Grip Cap.....		.30
10 " Tandem Blade Compn. Cap.....		.25
Radio Jack Plug.....		.50
Chapman Plug Reversible.....		.85
Disappearing Door Plug Brass Top.....		1.00
10 Amp. 2 Wire Polariz. Comp. Cap.....		.25
10 " 2 " Cord Grip Cap.....		.40
20 " 2 " Comp.....		.75
20 " 2 " Cord Grip.....		.75
30 " 2 " Comp.....		.75
30 " 2 " Cord Grip.....		1.65
10 " 3 " Comp.....		.45
10 " 3 " Cord Grip.....		.65
20 " 3 " Comp.....		.65
20 " 3 " Cord Grip.....		1.00
30 " 3 " Pure.....		.65
30 " 3 " Comp. Cord Grip.....		1.50
40 " 3 " Heavy Duty Angle Cap.....		2.50
Lamp Only 110 Volts for Bull's Eye Receptacles.....		.65

STANDARD RECEPTACLES OR CONVENIENCE OUTLETS

Without Plates		Plates Extra	Price
Shallow	Comp. Side Wired	Single.....	\$2.50
"	"	Duplex.....	.35
"	Porc.	Single.....	.25
"	"	Duplex.....	.35
Deep	Comp. Top	Single.....	.40
"	"	Duplex.....	.60
"	Porc.	Single.....	.40
"	"	Duplex.....	.60

Plates Extra Except Where Marked "X"

For Lift Cover Plate	Single	.....	\$ .50	
	Duplex	.....	.70
xWith Rd. Met. Cvr. For 3/4 Box	Single	.....	.30
x	Duplex	.....	.45
x	"	4	Single35
x	Duplex	.....	.50
xWith Rd. Brass Plate Small Single	.....	1.10		
	Large	.....	1.25	
Edison Screw Base Recp. Single	.....	.25	
Chapman Receptacle	.....	.65	
Radio Single	.....	1.00		
	Duplex	.....	1.35	
Disappearing Door Recp. Single	.....	.75	
	Duplex	.....	1.10	
Screwless Plate Recp. Single	.....	.30	
	Duplex	.....	.45
10 Amp. Polariz. For 2	Wire Single	.....	.45
20	"	.....	1.25	
30	"	.....	1.40	
30	"	2	Single	3.00
10	"	3	1.40	
20	"	3	1.60	
40 Amp. Polariz. 3 Wire	With Box Cover	.....	4.75	
	.....	.....	5.00

No.	Connections	Brass	Bakelite
134	Several loud speakers.	\$2.50	\$2.60
135	Loud speaker.	1.00	1.10
136	Aerial & ground.	1.00	1.10
137	Battery (switch plug).	2.50	2.60
138	Electrical only.	1.00	1.10
142	Double loud speaker.	1.15	1.85
238	Loud speaker, aerial & ground.	2.00	2.20
241	Aerial, ground & elect'l.	2.00	2.20
243	Loud speaker & elect'l.	2.00	2.20
239	Aerial, ground & battery.	2.50	2.70
353	Loud speaker, aerial, ground & elect'l.	3.00	3.20

Pilot Light-Plate and Single Outlet Comp.....	\$2.00
" " Duplex	3.50
" " Switch and Bull's Eye	3.00
" " Recept. Only With Plate	2.00
Switch and Plate Amp. Sels. Out. Comp.	2.50
20	1.50
Hubbell Switch Tap Combination Screw Plate #7003-Recep. #7163 ..	1.75
Hubbell Switch Tap & Pilot Light Comb. Screw Plate #7317-Recep. #7280 ..	3.35

ALABAX RECEPTACLES AND FIXTURES
P & S, Hubbell, Arrow, G. E., Bryant, Weber
 Symbol: Column No. 1—Number of Alabax Fixture.
 Column No. 2—Resale Price Standard White Glaze Finish.
 Column No. 3—Resale Price All Over Color B-D-E-F-G-H.
 Column No. 4—Resale Price Stripe Decoration No. 1A-2A

Column No. 1	Column No. 2	Column No. 3	Column No. 4	Column No. 5	Column No. 6	Column No. 7	Column No. 8	Column No. 9	Column No. 10
AL 844	\$2.00	\$2.00	\$3.35	.....	AL 849	\$2.30	\$2.60	\$2.75	\$2.75
845	3.20	3.65			850	2.30	2.60		2.75
846	3.45	3.90	\$4.35		851	1.40	1.65		1.85
847	3.75	4.20	4.65		852	2.90	3.35		3.80
848	1.85	2.10	2.30		853	3.20	3.65		4.10

(Concluded in next column)

Column Column Column Column Column Column Column Column

Column No. 1 Number	Column No. 2 White	Column No. 3 Stripes	Column No. 4 Stripes	Column No. 1 Number	Column No. 2 Numbite	Column No. 3 Color	Column No. 4 Stripes
AL859	1.85	\$2.15	\$2.30	AL1275	\$0.85	\$1.00	\$1.10
863	1.85	2.15	2.30		.15	.30	.40
864	2.35	2.85	3.25		2.80	3.05	3.25
865	2.70	3.10	3.60		2.80	3.05	3.25
866	2.35	2.85	.....		2.60	2.90	3.10
867	2.70	3.10	.....		2.60	2.90	3.10
869	2.50	2.75	3.00		1.70	1.95	2.15
870	2.50	2.75	3.00		2.90	3.35	3.25
871	1.55	1.85	2.00		2.80	3.05	3.25
872	2.90	3.35	3.85		1.85	2.10	2.30
873	3.20	3.65	4.10		2.70	2.85	3.15
875	2.30	2.60	2.80		2.70	2.85	3.15
898	1.00	1.20	1.40		1.75	2.05	2.25
919	1.65	1.90	2.10		2.85	3.15	3.30
920	1.65	1.90	2.10		2.85	3.15	3.30
921	1.65	1.90	2.10		1.95	2.20	2.40
922	1.65	1.90	2.10		2.65	2.90	3.10
923	2.30	2.60	2.75		2.65	2.90	3.10
924	2.00	2.25	2.45		1.25	1.50	1.70
929	1.95	2.20	2.40		1.35	1.60	1.75
930	1.95	2.20	2.40		1.25	1.55	1.70
949	2.00	2.25	2.45		1.40	1.65	1.80
950	2.00	2.25	2.45		1.05	1.35	1.50
951	1.10	1.35	1.55		2.02	1.40	1.55
952	1.95	2.20	2.40		1.55	1.85	2.00
960	1.00	1.30	1.45		1.65	1.95	2.10
962	2.00	2.25	2.45		1.40	1.65	1.85
969	2.15	2.45	2.60		1.85	2.15	2.35
970	2.15	2.45	2.60		2.60	3.20	3.65
971	1.25	1.50	1.70		2.75	3.20	3.65
980	1.55	1.80	2.00		2.60	4.40	5.80
981	1.40	1.65	1.85		2.87	3.95	4.50
982	1.55	1.80	2.00		2.86	3.90	4.50
983	1.50	1.75	1.95		2.87	3.75	4.20
984	1.35	1.60	1.80		2.82	2.90	3.35
985	1.20	1.45	1.65		2.853	3.20	3.65
989	1.70	1.95	2.15		2.864	2.35	2.85
990	1.75	2.05	2.20		2.865	2.65	3.10
1000	2.00	2.25	2.45		2.872	2.90	3.35
1201	2.30	2.55	2.75		2.873	3.20	3.65
1202	2.00	2.25	2.45		2.875	2.45	2.95
1203	2.30	2.55	2.75		2.836	1.90	2.20
1273	.50	.60	.70		2.886	2.10	2.40
1274	.75	.90	1.00		2.906	2.20	2.45

The above Prices do not include Glassware or Lamps.

STANDARD RECEPTACLES or Lampholders
Keyless Porcelain
Standard Base

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	Standard Size	Price
Porcelain Pull for 4" Box	3 3/4" x 4"	\$1.80
Brass Shell	3 3/4" x 4"	2.00
Porcelain Keyless for 3 3/4" Box	4"	.40
"	4"	.50
"	3 3/4" x 4" Box	1.00
"	Wpl. for 3 3/4" Box	.50
"	For 3 3/4" x 4" Box	1.00
Brass Shell	4"	.60
Porc. Rec. Metal Cover for 3 3/4" Box	4"	1.25
"	4"	.30
"	Wpl. 3 3/4"	.30
"	4"	.35

10	Amp.	Standard Receptacle.....	\$0.50
10	"	" " " " " " " " " " " " " " " "	.56
10	"	Receptacle with Covered Term.80
20	"	Polarized Conduit Receptacle85
10	"	Sgle. Pore. Rec. for 3/4" Box45
10	"	Duplex " " " " " " " " " " " " " " " "	.45
10	"	Sgle. " " " " " " " " " " " " " " " "	.60
10	"	Duplex " " " " " " " " " " " " " " " "	.70

10 A. Small T Slot	2	Wires	1.40
10 A. Small T Slot Cleat	2	"	1.40
10 A. Small For Wood Molding	2	"	1.40
10 A. Polarized Cleat	2	"	1.40
10 A. Polarized Concealed	2	"	1.40
10 A. Polarized Wood Molding	2	"	1.40
10 A. Fielding Receptacle	2	"	1.40
10 A. Polarized Concealed	2	"	1.40
10 A. Polarized Cleat	2	"	1.40
20 A. Polarized Concealed	2	"	1.40
20 A. Polarized Wood Molding	2	"	1.40
20 A. Polarized Concealed	3	"	1.40
30 A. Polarized Composition	2	"	1.40
40 A. Polarized Porcelain	2	"	1.40
40 A. Polarized Composition	2	"	1.40
Ports, Sub. Base for 40 Amm. Rec.			1.40

SIGN RECEPTACLES—Standard Base

Keyless Removable Ring		Price
Stand. Shallow	Screw Term.	\$0.30
"	Covered "	.35
"	With 6" Wire Lead	.40
"	S. H. Groove	.40
Competitive Shallow	Screw Term.	.15
"	Covered "	.15
"	No. 14 Wire Lead	.14
Deep Type With	Screw Term.	.30
"	Covered "	.45
"	No. 8 Wire Lead	.40
Solid Sign Rec. With	Screw Trim	.20
Intermediate Base		Price
Porcelain Cleat	Receptacle	\$.25
"	" 2 Screw	.30
"	" with Spring Stud	.30
"	" Removable Ring	.30

R-SUNDRIES

STANDARD ROSETTES—Porcelain		Price
Cleat—1 Piece Junior Fuseless Rosette.....		\$.18
" 2 " " "		.25
" 3 " " "	Fusible .....	.35
Concealed—2 Piece Concealed Fuseless Rosette.....		.25
" 2 " " "	Fusible .....	.35
" 3 " " "	Fusible .....	.25
" 2 " For Wood Moulding—Fuseless		.35
" 2 " " Fusible .....		.35
Box Type—1 Piece Rosette or Box Cover Fuseless.....	3/4" Box	\$.20
" 1 " " with Brass Terminals	1" Box	.35
" " Brass Covered for Boxes		1.20

For Special Condulet Rosettes—See Pages PL-10, 11 and 12.

GROUND RODS

GROUND RODS			
	Copperweld	Galvanized Not Wired	Galvanized Wired
Size	Price	Price	Price
1/2" x 3/4" Foot.....	\$.60	\$.30	.....
1/2" " .....	.70	.35	.....
3/4" "	1.30	.30	\$.65
1" "	1.50	.55	.70
1 1/2" "	1.95	.....	.....
2" "	2.40	.....	.....
2 1/2" "	1.95	.....	.....
3" "	2.30	.85	1.00
3 1/2" "	3.00	1.10	.....
4" "	3.70	.....	.....
4 1/2" "	2.70	.....	.....
5" "	4.20	.....	.....
5 1/2" "	5.20	.....	.....

RAWLPLUGS—Standard Types

Number of Rawplug	Drill Hole	For Screw No.	Price Each Any Length
6	5/8	6-7	\$.02
8	5/8	8-9	.03
10	5/8	10-11	.04
12	5/8	12	.06
14	5/8	14	.06
16	5/8	16-18	.08
20	5/8	20-22	.12

Rawlplugs for Lag Screws

Size of Lag Screw	Size Drill Hole	Size of Rawiping	Price Each			
			1 1/2"	2"	2 1/2"	3"
			\$.13	\$.15	\$.18	\$.20
			.14	.17	.20	.23
		20	.23	.26
		27	.30

NOTE: For Expansion Shields—See Page PL-10.

SOCKETS

COMPLETE STANDARD SOCKETS								
Complete With	Pend. Cap	$\frac{3}{8}$ Brass	$\frac{1}{2}$ Brass	$\frac{3}{4}$ Brass	$\frac{1}{2}$ Brass	$\frac{3}{4}$ Aug.	$\frac{1}{2}$ Aug.	Pend. Cord Grip
	Standard Brass Shell Sockets							
Key	.25	.25	.40	.45	.55	.55	.60	.40
Keyless	.20	.20	.35	.40	.50	.55	.58	.40
Full	.32	.32	.50	.55	.60	.65	.70	.50
Push	.30	.30	.45	.50	.55	.60	.65	.50
	Electrolier Brass Shell							
Key	.25	.25	.40	.50	.....	.60	.65	.....
Keyless	.22	.22	.35	.45	.....	.55	.60	.....
Full	.35	.35	.45	.60	.....	.70	.75	.....
Push	.30	.30	.40	.50	.....	.60	.65	.....
	Leveller Full							
Full	.50	.50	.60	.....	.....	.....	.....	.....
	Threaded Catch Brass Sockets							
Key	.45	.45	.60	.60	.65	.....	.....	.60
Keyless	.40	.40	.55	.55	.60	.....	.....	.55
Full	.60	.60	.75	.75	.85	.....	.....	.75
Push	.50	.50	.60	.60	.65	.....	.....	.60
	Cold Molded							
Key	.50	.55	.70	.....	.80	.....	1.20	.70
Keyless	.45	.60	.65	.....	.75	.....	1.15	.65
	All Porcelain Sockets							
Key	.50	.65	.70	.90	.85	.....	1.30	.75
Keyless	.45	.60	.65	.85	.80	.....	1.25	.70
Full	.95	1.10	1.15	1.35	1.30	.....	1.75	1.25
Push	.65	.75	.80	1.05	1.00	.....	1.40	.85
	Lock Type Brass Sockets							
Key	1.00	1.00	1.10	1.20	1.25	1.30	1.35	1.25
Keyless	.95	.95	.05	1.10	1.20	1.25	1.30	1.20
Full	1.25	1.25	1.35	1.45	1.50	1.55	1.60	1.50
Push	1.00	1.00	1.10	1.20	1.25	1.30	1.35	1.25

CAPS For Above Sockets

	Pend.	$\frac{1}{4}$ Brass	$\frac{1}{2}$ Brass	$\frac{3}{4}$ Brass	$\frac{1}{2}$ Brass	$\frac{1}{2}$ Angle	$\frac{1}{2}$ Angle	Pend. Cord
Standard Brass Cap	\$.10	\$.10	\$.20	\$.30	\$.40	\$.40	\$.50	\$.30
Electrician "	.10	.10	.20	.30	....	.40	.50	....
Brass Threaded "	.15	.15	.25	....	....	....	....	.30
Cold Molded "	.15	.30	.35	....	.50	....	.90	.35
All Formline "	.15	.30	.35	.55	.60	....	.90	.35

BODIES FOR STANDARD SOCKETS

	Key	Keyless	Pull	Through
Standard Brass Shell Body Only.....	\$.20	\$.15	\$.30	\$.25
Standard Electrolier Shell Body Only.....	.20	.15	.30	.25
Brass Shell Threaded Catch Body.....	.40	.35	.55	.50
Cold Molded Composition Body.....	.45	.35	.....	.50
All Porcelain Body Only.....	.40	.35	.80	.75
Lock Type Brass Shell Body Only.....	.95	.90	1.20	.95

BASES FOR SOCKETS

BASES Only For Brass and Porcelain Sockets		Price
Cleat Base For Open Wiring.....		\$.40
Concd. Base for Concd. Wiring—Small.....		.....
Brass Cov. Base Concd. Wiring—Small.....		.50
Brass Covered Base for 3/4" Box.....		.65
Brass Covered Base for 4" Box.....		1.10
Angle Concealed Base.....		.40
All Porcelain Cleat Base.....		.40
All Porcelain Concealed Base.....		.25
All Porcelain For 3/4" Box.....		.35
All Porcelain For 4" Box.....		.40
All Porcelain For 4" Box.....		.55

BRASS BAYONET SOCKETS

Sometimes Called Wall Sockets or Receptacles			
Keyless Brass Shell with Small Conc. or Slotted Base.....		50717 & 18	\$ 40.
" " " Covered Base		60019	.65
" " " Large		60020	.90
Key " " Small Concealed Base		9184	.85
" " " Covered		60018	.85
" " " with Removable Ring		50746 & 7	.65

BRASS TWIN SOCKETS & ADAPTORS of Current Type

Pull Adaptor Socket—No Outlet.....	\$1.10
Pull Adaptor Socket T Side Tap.....	1.35
Pull Twin Socket-Screw Side Outlet.....	2.00
Pull Socket $\frac{1}{4}$ " Cap T Side Tap.....	1.10
Keyless $\frac{1}{4}$ " Cap Side T Side Tap.....	.80
Key $\frac{1}{4}$ " Cap Side T Side Tap.....	.75

WEATHERPROOF SOCKETS

Composition Mica or Porcelain with Leads.....	8.25
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CANDLE SOCKETS

Stand. Base Keyless Candle Socket with Rigid or Adjust. Hickey	\$.15
" " Push Candle Socket with Rigid or Adjust. Hickey	.63
" " Pull Candle Socket with Rigid or Adjust. Hickey	.74
Std. Base Turn or Tumbler	.48
Lewistier Bracket Candle Sockets Lever	.70
" " Porcelain No. 121-122	.70
" " Fibre No. 123-124	.70
" " Brass Lever No. 127	.70
Intermediate Base Pull Candle Socket with Paper Jacket	1.25
Intermediate Base Keyless Candle Socket Porcelain	.25
Candelabra Type Keyless Socket	.25
Candelabra Type Pull Chain Socket	1.35

CANDELABRA OR MINIATURE SOCKETS

Keyless Porcelain Male	.....	1.30
Female	.....	.30
Brass Shell $\frac{1}{4}$ " Cap	.....	.50
Key	.....	.50
Poll	.....	.90
Brass Shell Push $\frac{1}{4}$ " Cap	.....	.50
Candle Type Keyless	.....	.50
Poll	.....	1.30

DIM-A-LITE & LO-LITE SOCKETS

No.....	23	23A	33	34	91
Price.....	\$1.00	\$1.25	\$1.25	\$1.25	\$1.50

STANDARD BASE HUSK AND REFLECTOR TYPE

Porcelain Keyless		Price
One Piece with Threaded Cap.....		\$.41
One Piece with Angle Cap Threaded.....		.46
Two Piece Body Only.....		.60
Two Piece with $\frac{1}{4}$ Brass Cap.....		.68
Two Piece with $\frac{1}{2}$ Brass Cap.....		.80
Two Piece with Pendant Cord Grip.....		.81

INTERMEDIATE BASE Sockets

Key Socket 1/4 Cap.....	\$.60	Push Socket 1/4" Cap.....	\$0.60
Keyless Socket 1/4 Cap.....	.55	Wpf. Socket Wire Leads.....	.25
Pull Socket 1/4 Cap.....	1.40		

SOCKET ACCESSORIES

Adaptors for Sockets—See Pages PL 4 and 15	
Acorn Hubble 5010-6982-7004—or Similar—Each	\$ 1.00
Acorn Luminous Hubble 7015 Bryant 750 GE 900—or Similar—Each	3.00
Bushings Hard Rubber $\frac{1}{2}$ " Each .01c— $\frac{3}{4}$ " Each	.02
Clips for Pull Sockets—Per Foot	0.00
Cord for Devices—Light Type—Per Foot	0.00
Cord for Devices—Heavy Type—Per Foot	0.00
Handles for Sockets—Bryant 1240-1385—or Similar	1.00
Splicing Links Non-Insulating for Chais—Each	1.00
Splicing Links Insulated for Chais—Each	1.00

SOCKETS, HEAVY DUTY

MOGUL SOCKETS

Arrow, Bryant, G. E., Hubbell, H. & H., P. & S., Weber

All Keyless		With Body Only	With Iron Yoke	With Alum. or Brass Cap
Porcelain One Piece Socket Mogul	.....	\$ .60	\$.75	\$.95
Two	.....	.75	.95	1.10
One with Lens	.....	.75	.95	1.10
Brass Shell Keyless Mogul Socket	.....	3/4 or 1 1/4 Brass Cap	.....	.....
	.....	3/4 or 1 1/4 Shadeholder	.....	.....

HEAVY DUTY WEATHERPROOF SOCKETS

Copper or Aluminum		Price
2 Piece Keyless	3/4 or 1 1/2" Cord	1.00
2	with Cord Grip	1.00
1	3/4 or 1 1/2" Nipple	1.00
1	with Cord Grip	1.00
Shadeholders for above sockets.		1.00
3/4" Aluminum or Copper Extra		1.00
3/4"		1.00
1"		1.00
1 1/2"		1.00

Price Each

Benco Keyless Socket	with Clamp Ring #4700 to 4703 Medium Base	\$1.25
	without " " " "	1.05
Pull	with " " " "	2.00
Benco Keyless Socket	Copper or Alum. #4200-1-45 & 4335 & 7	.75
	Brass #4202-4203-4336	.90
Pull	4207-S 4225-26 4236-37 Brass, Copper or Alum.	1.50
Mogul	Copper Clad #4210-4297	2.00
Benco Threaded Holders Only		
Polish Alum. Weathrplugs	#4215 & 4217	.35
Copper	" " " "	.60
Brushed Brass	4370-72 & 73	.40
	4377-79 & 80	.60

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	Without Yoke	% or 1/2 from Yoke	% or 1/2 Alum. Yoke
One Piece Socket with Lamp Grip.....	\$1.00	\$1.15	\$1.50
Two Piece Socket with Lamp Grip.....	1.20	1.45	1.70

With Type X or XR Fitting

Medium Base Keyless Tapped	1/4-3/4-3/4 No. 4650-51 & 65	\$1.20
"	Self Locking 1/4-3/4-3/4 No. 4528-29-30-32-33	1.60
"	" Shock Absorb. 1/4-3/4 No. 4676-77-78-80-81	3.45
"	" Shock Absorb. Self Lock No. 4548-49-50-52-53	1.90
"	" Pull Chain No. 4534-35 & 4660-61-62	2.05
Mogul Base Keyless	Shock Absorbing No. 4670-71-77	1.95
"	Not Shock Absorbing No. 4656-57 4666	1.65
If X or XR Fitting not supplied on above sockets deduct		.45

Plates & Boxes Extra		Price
Square Handle Porcelain Cup—Sgl. Pole.....		\$.35
" " " Dble.....		1.00
" " " 3 Way.....		.50
" " Composition Cup—Sgl. Pole.....		3.00
" " " Dble.....		.85
" " " 3 Way.....		1.35
" " " 4.....		1.00
20 Amp. Sgle. Pole.....		3.25
20 Amp. Dble. Pole.....		1.35
Round Handle Porcelain Cup—Sgl.....		.35
" " " Dble.....		1.00
" " " 3 Way.....		.50
" " " 4.....		8.00
New Circuit Type		
Twin-2 Sgle. Pole Switches.....		\$1.35
Twin-1 Sgle. Three Way.....		2.10
Twin-2 Sgle. 3 Way Switches.....		1.20
Triplet-2 Sgle. Pole Switches.....		1.90
Triplet-2 Sgle. & 1-2 Way Switches.....		1.90
Lock Type Porcelain Cup—Sgl. Pole.....		.30
" " " Dble.....		1.25
" " " 3 Way.....		1.65
" " " 4.....		8.95
EXTRAS—For Luminous Tip add for Each Handle.....		
For Glo Globe Handle Switches add for Each.....		1.00

	Price
Comb. One Tumbler Switch & One Flush Recep. with Plate Less Box.	\$2.00
Comb. One Tumbler Switch & One Bulls Eye with Plate Less Box.	3.00
Comb. Switch Tap & Recep. Hubbell 7163-64 Less Plate and Box.	1.60
Comb. Switch Tap & Pilot Light Hubbell 7180-81 Less Plate and Box.	2.65

Price

	1	2	3	4
	Gang	Gang	Gang	Gang
Stamped Brass Sprayed Finish .040 Thick.....	\$.15	\$.30	\$.45	\$1.35
" " Brush Brass .040 .....	.20	.40	.60	1.50
" " Sprayed .060 .....	.20	.40	.60	1.70
" " Brush Brass .060 .....	.30	.60	.90	1.80
Bakelite or Composition Molded.....	.20	.40	.60	.90
Twin & Triple Struck Up Plates.....	.30	.50	.70	1.00
" " Solid Brass .....	.50	.50	.50	.50
Hubbell Bakelite Screwless Plates.....	.60	1.10	1.60	
Bryant Deluxe Wood Inlaid any Finish.....	2.25	3.00	6.40	
" " All Metal .....	.85	1.50	2.10	
Guth Porcelain Enamel Plates.....	.30	.65	1.00	
Glass Mirror Plates.....	1.00	1.75	2.50	3.25
Blank Plate .040 Brush Brass Finish.....	.30	.60	.90	
Telephone Plate .040 Brush Brass Finish.....	.35	.70	1.05	
Combination Switch & Receptacle Plate—Molded.....	.40	.80	1.20	
" " Brass	40	40	40	40

Plate & Boxes Extra		Price
Standard Shallow Type Porcelain Cup—Single Pole	Double	\$0.30
	3 Way	1.10
	4	1.50
Deep Type Porcelain Cup—Single Pole	Double	3.00
	3 Way	1.10
	4	1.10
Special High Grade	Single Pole	1.10
	Double	1.80
	3 Way	1.80
	4	3.00
Lock Type Porcelain Cup—Single Pole	Double	1.40
	3 Way	1.80
	4	3.70
Electroliner Non-Indicating	Indicating	1.90
Extra for Luminous Button Add Per Switch		1.00

With Plates

Bryant	117	D. P. Luciat. Switch	Flush Receptacle	& .060 Plate	.....	\$2.00
	413	One Push Switch-Bulls Eye and Solid Plate			.....	4.00
	518		Disap. Door Recp.	Bulls Eye-Solid Plate	.....	7.50
	465	D. P. Flush Switch & Pilot Lamp	.060 Plate		.....	3.50
	467	Flush Switch-Flush Recp.-Bulls Eye-Solid Plate			.....	6.00
	538		Duplex		.....	6.80
H & H	3752		Bulls Eye-Solid Plate		.....	3.00
	3750		Duplex Recp. Solid Plate		.....	3.50
	3819		Single		.....	5.30

Price

	1	2	3	4
Description	Gang	Gang	Gang	Gang
Stamped Brass Sprayed Finish .040 Thick.....	\$.15	\$.20	\$.45	\$1.35
" " Brush Brass .040 .....	.20	.30	.60	1.55
" " Sprayed .060 .....	.20	.30	.60	1.60
" " Brush Brass .060 .....	.20	.30	.90	1.85
Bakelite or Composition .....	.20	.40	.60	.80
Bryant DeLux Plates Wood Inlaid.....	2.25	3.90	6.40	.....
" " All Metal .....	.85	1.50	2.10	.....
Guth Porcelain Plates .....	.30	.65	1.00	.....
Glass Mirror Plates	1.00	1.75	2.50	.....
Blank Plate .040 Brush Brass Finish .....	.30	.60	.90	.....
Telephone ".040 .....	.35	.45	.....	.....
Combination Push & Receptacle Plates .060 Brass .....	.....	.....	.....	.50
" " " Molded .....	.....	.....	.....	.40
" " " Guth Enamel .....	.....	.....	.....	.65
" " " Mirror Glass .....	.....	.....	.....	1.75

Poles	Volts	Type	Size	5	10	20	30
Single	125	Non-Indicating.....	Pony	Amp.	Amp.	Amp.	Amp.
	"	Indicating.....	"	\$.40
	"	Non-Indicating.....	Standard	\$.75	\$1.45	\$2.15
	"	Indicating.....	"85	1.60	2.30
Double	250	Non-Indicating.....	"	1.05	2.25	2.65
	"	Indicating.....	"	1.00	1.20	2.40
Triple	"	Non-Indicating.....	"	3.00	3.00	4.70
	"	Indicating.....	"	3.25	4.10	4.80
3-Way	125	Non-Indicating.....	"	1.90	3.25	2.40
4-Way	"	Non-Indicating.....	"	3.00	3.50	2.50
Electrolier	"	Non-Indicating.....	"	1.40	1.40	2.20
	"	Indicating.....	"	1.55	1.55	2.35

Poles	Voits	Type	Size	5	10	20	30
Single	125	Non-Indicating.....	Pony	\$.55
"	125	Indicating.....	"	.65
"	125	Non-Indicating.....	Standard	.65	1.00	1.55	2.40
"	125	Indicating.....	"	.75	1.00	1.80	2.85
Double	250	Non-Indicating.....	"	.95	1.20	2.45	2.65
"	250	Indicating.....	"	1.10	1.35	2.60	3.00
3-Way	125	Non-Indicating.....	"	.95	1.35	2.60	3.00
3-Way	125	Non-Indicating.....	"	1.50
Electrolier	125	"	"	1.55	1.55
"	125	Indicating.....	"	1.70	1.70

Metal or Composition Covers

	Single Pole	Double Pole	3 Way	4 Way
125-250 Volt				
5 Amp. Closed or Slott. Base.....	\$.35	\$.85	\$.80	\$1.40
5 Amp. with Outlet Box Cover.....	.85	....	.90	....
10 Amp. Closed or Slott. Base.....	.80	1.10	1.25	....

Metal Covered	All Porcelain
Non	Non

	5 Amp. 125 Volts	Indicating	Non-Indicating	Indicating	Non-Indicating
Single Pole.....	\$.65		\$.60	\$.75	\$.70
Double ".....	1.20		1.10	1.20	1.15
Three Way.....			1.00	1.20	...
Electroliner.....	1.50		1.50	...	...

Price

Handles—Standard Type Each \$.12—Ratchet Type.....	.24
Bases—Porcelain 5 Amp. \$.12—10 Amp. \$.15—20 Amp.....	.30
Covers—10 Amp & Under Metal \$.15—Porcelain.....	.20
Over 10 Amp.....	.30

PULL CORD SWITCHES—BODIES ONLY		
Small Socket Type		
Ceiling—Bottom Pull.....		\$0.81
Wall—Side Pull.....		.91
Rosette—Side Pull.....		.93
Fixture—Bottom Pull.....		1.21
	1/4" Brass Cap.....	.10
	1/4" Brass Cap.....	.13
	5/8" Brass Cap.....	.30
Addition	Small Cleat Base.....	.33
for	Small Slotted or Concealed Base.....	.34
Caps and Bases	Large Concealed Base.....	.40
	Small Box Base Brass Covered.....	.56
Above Switch	3/4" Box Base Brass Covered.....	.66
Bodies	4" Box Base Brass Covered.....	1.10
	3 1/4" Box Cover with Ring.....	.28
	4" Box Cover with Ring.....	.32

S. P. with Small Porc. Slotted or Solid B.....	\$1.60
D. P. with Small Porc. Slotted or Solid B.....	1.90
3 & 4 Point with Small Porc. Slotted or Solid B.....	1.90

These switches can be furnished with side or bottom open, at same price.

For Ceiling Fixtures or Ceiling Fans

Single or Double Pole—3 & 4 Point Electrolier & Motor Control—Similar to
Bryant #2473 to 2480 with 3/4 Caps, cord & Ball Each.....\$2.00

Snap or Tumbler Canopy Switches any style any make (except below).....	Price
Pull Type P & S—3316 or 17—Arrow 340—Brvant 666.....	\$.40
	.95

McGill Co.

Tw-Lite Canopy or Fixture Switch #50-51-52.....	\$1.00
Link Switch #59.....	1.00
Conduit Box & Fixture Switch #61-62 & 63.....	1.00
Switch Hickey 64 & 64 A for above.....	.14

With Brass Pendant Cap

Brass Shell Pend. Cap	Side Button	.....	\$ .60
" " " " "	Bottom " "	.....	.80
" " Type "O" " "	" " " "	.....	1.00
All Porcelain	Side " "	.....	.60
(10 Amps)	" " " "	.....	.80

Nickel Feed Thru Switch.....		\$.50
Composition Feed Thru Switch.....		.80
Composition Feed Thru Switch.....	Egg Shape.....	.50
Composition Feed Thru Switch.....	Pony.....	.40

Door Switch without Box.....	\$4.00
Box Extra.....	.60

Edwards—commonly used types

#0	Door Opener Mortise Type	\$ 2.75	#132 Rim Type Flush	\$ 6.10
48A	"	34.25	#152 for Surface Conduit	25.10
50	"	31.25	154 Mortise Type	7.71
50A	" Rim	31.25	155 Plate Type	5.71
51	"	34.25	174 Door Switch	8.61
51A	" Plate	34.25	Box for above #2000	1.30
52	"	31.25	1541 Opener Mortise Type	10.50
#239	Latch for #52	3.55		

Partrick & Wilkins commonly used types

Mortise Type.....	\$2.75	Rim Type.....	\$5.00
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SWITCHES, KNIFE, ENTRANCE & PANEL

30 Amp. 125 Volts, Plug Fuses

Description	Location of Fuses	Price
Double Pole.....	Top	\$.80
" " " "	Bottom	.80
" " " " Large Size	Top	.90
" " " " " "	Bottom	.90
Triples.....	Top	1.25
" " " " " "	Bottom	1.25
Double Pole Single Branch.....	Top	1.35
" " " " " "	Bottom	1.35
" " " " " " Large Type	Top	1.50
" " " " " " " "	Bottom	1.50
Double Pole—Double Branch Vert. Mains.....		3.00
" " " " Horiz. Mains.....		3.00
Trip. at D. P. Double Branch Vert. Mains.....		3.15
" " " " Horiz. Mains.....		3.15

Any Make

Any Make		Porcelain Base, 125 Volts		Slate Base 250 Volts	
		15 Amp.	30 Amp.	15 Amp.	30 Amp.
Single Pole	Single Throw	\$.50	\$.60	\$.60	\$.70
	Double	.85	1.05	1.00	1.25
Double	Single	.60	.70	.70	.82
	Double	.95	1.05	1.50	1.85
Triple	Single	1.30	1.55	1.50	1.85
	Double	2.00	2.50	2.00	2.50

Slate Base Front Connected

Front Connected Slate Base		Not Fusible			Fusible		
		2 Pole	2 Pole	4 Pole	2 Pole	3 Pole	4 Pole
Sgl. Throw	30 A. 250 V. Only	\$1.15	\$1.65	\$2.25			
"	250 & 500 V. AC						
"	30 A.	1.75	2.65		\$1.70	\$2.60	\$3.50
"	60 A.	2.00	3.00	4.05	2.95	4.45	5.95
"	100 A.	4.10	6.20	8.25	6.00	9.05	12.05
"	200 A.	7.45	11.15	14.85	11.10	16.70	22.25
Dbl. Throw	30 A. 250 V. Only	1.90	2.95	4.22			
"	250 & 500 V. AC						
"	30 A.	2.80	4.25		3.60	5.80	7.95
"	60 A.	3.30	6.10	7.75	5.60	8.95	12.25
"	100 A.	7.40	11.35	16.10	12.20	19.50	26.85
"	200 A.	12.35	19.05	25.55	21.40	34.30	43.90

**SWITCHES, RESIDENCE, METER
SERVICE, INDUSTRIAL, ETC.**

For Cadmium Plated or Galvanized Switches Add 40%

30 Amp. "Square D" Switches Residence Type

Numbers	Volts	Description	2 Pole	3 Pole
97211-97311	125	For Plug Fuse Solid Neut.	\$1.65	\$2.50
99211-99311	125	" " Neut. Fused.	1.65	3.00
78211-78311	125	" " Meter Test.	2.55	4.10
1211	125	Porc. Entr. Switch	1.80	
97251-97351	250	Encl. Fused Solid Neut.	1.65	3.30
99251-99351	250	" " Fused Neut.	2.50	4.25

"Square D" Accessible Main Fuses Without End Walls

Amps. Poles		Fused For	Neutral	Meter		Non-Meter	
				Test Type	Price	Test Type	Price
30	2	2 Plug	Fused	30211	\$ 4.00	10211	\$ 3.50
30	2	"	Solid	30231	3.50	10231	3.00
30	3	"	Fused	30331	4.50	10331	4.00
30	3	"	Unfused	30381	5.20	10381	5.20
30	2	2 Enc.	Fused	30251	4.80	10251	4.60
30	2	1 "	Solid	30271	3.90	10271	3.90
30	3	"	Unfused	30361	4.80	10361	4.25
30	3	"	Solid	30371	4.80	10371	4.60
60	2	"	Fused	30252	15.10	10252	14.20
60	2	1 "	Solid	30272	14.20	10272	13.30
60	3	"	Unfused	30362	21.65	10362	20.55
60	3	"	Solid	30372	16.00	10372	15.05
100	2	"	Fused	30253	23.85	10253	23.00
100	2	1 "	Solid	30273	23.85	10273	22.10
100	3	"	Unfused	30383	30.90	10383	29.35
100	3	"	Solid	30373	25.60	10373	23.85

"Square D" Main Fuses Sealed Without End Walls

Amps.	Poles	Fused For	Neutral	Meter Test Type		Number	Price	Non-Meter Test Type		Number	Price
30	2	2	Fused			36211	\$ 3.50			16211	\$ 3.10
30	2	2	Solid			36231	3.20			16231	3.10
30	3	2	Fused			36331	3.70			16331	3.25
30	3	2	Unfused			36381	3.70			16381	3.75
30	2	2	Fused	Enc.		36251	4.10			16251	3.70
30	2	1	Solid			36271	3.80			16271	3.40
30	3	2	Unfused			36361	4.30			16361	3.85
30	3	2	Solid			36371	4.30			16371	3.85
60	2	2	Fused			36252	12.00			16252	11.95
60	2	1	Solid			36272	12.00			16272	11.10
60	3	2	Unfused			36362	19.00			16362	17.90
60	3	2	Solid			36372	13.75			16372	12.85
100	2	2	Fused			36253	21.25			16253	20.35
100	2	1	Solid			36273	21.25			16273	19.45
100	3	2	Unfused			36383	26.50			16383	24.75
100	3	2	Solid			36373	23.00			16373	21.25

Enclosed Double Branch Cutout No. 35211—30 Amp. 125 Volts.....	Price
Fused Plug Receptacle..... 5021—30 " 125 "	\$2.35
Cartridge 5001—30 " 250 "	2.20
Cabinet Porcelain Fuse Block... 1021—30 " 125 "	5.65
	1.25

"Square D" Meter Service Types

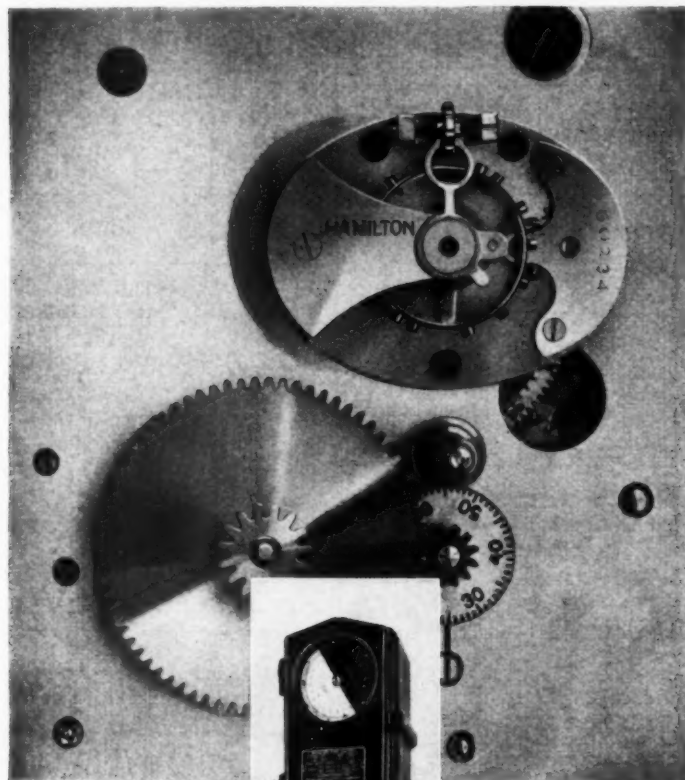
Single Type		Ganging Type	
No. 32211 or 32311.....	\$3.70	No. 12211-12311.....	\$4.15
No. 32311.....	4.00	No. 12311.....	4.45
No. 34211.....	4.60	No. 14311.....	5.65
No. 34311.....	5.25		

"Square D" Without End Walls Live & Dead Fuse Type

METER TESTING						
Number	Amps.	Pole	Fused	Neutral	Description	Price
55211	30	2	1	Plug	Single Type Fuse Dead.....	\$ 2.35
55211	30	2	1	Solid	" " " Live.....	2.95
SK-916	30	2	1	"	" " " " "	2.95
55311	30	3	2	"	" " " " "	3.70
57311	30	3	2	"	" " " " "	3.70
15211	30	2	"	"	Gang Type Fuse Dead.....	2.80
15211	30	2	"	Fused	" " " " "	3.35
39231	30	2	1	"	Gang Type Acces. M. Fuses	4.40
39331	30	3	2	"	" " " " "	5.20
15311	30	3	2	"	" " " " "	4.15
17311	30	3	2	"	" " " " "	4.15
58251	30	2	2	Cart.	Extra for End Wall.....	.30
26251	30	2	2	"	Cartridge Fuse Live.....	3.30
57351	30	3	2	"	" " " " "	4.05
28252	60	2	"	"	" " " " "	8.45
27312	60	3	2	"	" " " " "	8.90
14312	60	3	2	"	" " " " "	19.80
28253	100	2	"	"	" " " " "	15.05
27313	100	3	2	"	" " " " "	15.95
14313	100	3	2	"	" " " " "	27.30

the New **SANGAMO TIME-SWITCH**

IS DESIGNED BY ENGINEERS TO MEET
ENGINEERING IDEAS OF PERFORMANCE



Close-up of the escapement of the Sangamo Time-switch with cover open, with dial off and with dust cap for escapement removed. Precision of design and construction is evident throughout. Accurate adjustment of clock movement is insured by micrometer adjustment provided on escapement.

Precise synchronization of switching operation with clock movement is effected by dial located below the escapement. Inset: Sangamo Time-switch with conduit-connected base.



THE Sangamo Time-switch has been designed and constructed to measure up fully to every engineering requirement of performance: accurate time-keeping, operation through current interruptions, independence of frequency and voltage variations, suitability for a. c. or d. c. operation.

The Sangamo Time-switch embodies the high-grade construction of the Hamilton-Sangamo clock. The clock mechanism is a standard Hamilton-Sangamo movement with a jeweled Hamilton escapement, temperature compensated, and equipped with a micrometer adjustment, providing perfect regulation without removing the protecting dust cap.

The switch mechanism is actuated by the mainspring through a differential gear. It is not affected by current interruptions, because the mainspring is kept at a constant tension by a noiseless Sangamo motor.

The 24-hour dial is arranged to provide one "open" or "close" operation, as frequently as every fifteen minutes through a 24-hour cycle.

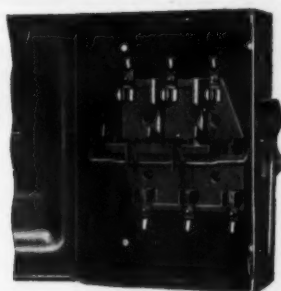
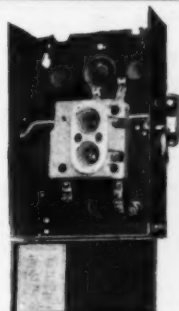
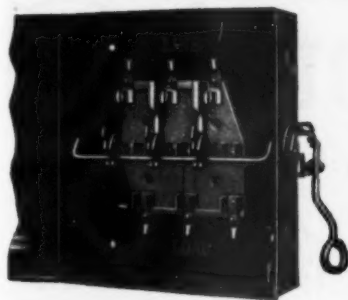
All working parts are readily accessible, removable as units and interchangeable. This results in low cost operation and maintenance.

Sangamo Time-switches are available with H C Meter terminal chamber or conduit-connected base.

Send for literature.

SANGAMO ELECTRIC COMPANY, SPRINGFIELD, ILLINOIS

Which materials are you going to work with... good or questionable?



**Advantages of C-H
"Standard Duty"
Type C Switch**
(Bulletin 4131)

Quick make and quick break prevent burning of contacts, give far longer life. Molded crack-proof base. Rugged, careful construction. Small case yet easy to wire. Removable handle to prevent tampering. Six sizes, from 30 to 400 amps. 250 and 600 volts.

**Advantages of C-H Universal Meter
Service Switches**
(Bulletin 4311)

First standard device offering economical provision for branch circuits. Compact switch block combines enclosed sealed main fuse and exposed accessible branch fuses in one unit. One or two blade types for two or three wire installations. Circuit dead fuse type. Connections conveniently located.

**Advantages of C-H
General Duty
Entrance Switch**
(Bulletin 4141)

Type C design and construction. Smaller in size, ample wiring space. Smaller switch bases. Quick break to reduce arcing and prolong life. Plug fuse or cartridge fuse type. 21 sizes, from 30 to 100 amperes, 125 and 250 volts. Low price.



THE moment you bring any wiring material into your shop . . . it becomes part of *your* organization, an important part of your work. Your name goes with it onto the job; yours is the responsibility for its performance.

You can always be sure of the quality of Cutler-Hammer Safety Switches. In every way they are representative of the skill and knowledge Cutler-Hammer has gained in the design of standard and special Motor Control. They reflect the manu-

facturing ability which has made the trademark "C-H" known and respected throughout the electrical world. Cutler-Hammer's reputation backs these switches, assures entirely satisfactory performance.

There is a Safety Switch in the C-H line to meet every need . . . to meet any price-requirement . . . to provide a fair basis for insisting on a fair profit for yourself. Your wholesaler can supply you.

And we will send you a catalog upon request.

CUTLER-HAMMER, Inc.

Pioneer Manufacturers of Electric Control Apparatus

1307 St. Paul Avenue - MILWAUKEE, WISCONSIN

CUTLER HAMMER

High Quality Safety Switches For Every Service

A-377

and Less Talk About Needed *Today* In Contracting"

"What is needed more than anything else in this 'old game of ours' " concluded Mr. Schuck, "is more salesmanship and less talk about cut-throat competition. Of course you must use the best equipment and we have for many years held our customers and our reputation by the use of Cutler-Hammer Wiring Devices."

Mr. Schuck's experience is not unusual. Leading contractors everywhere are talking *complete wiring*. More equipment is sold thereby. More wiring is needed to install this equipment. And in the end the customer, as well as the contractor, benefits.

Selling *complete wiring* is good business today. Show your customers how a complete wiring plan makes a building more convenient, more usable, more salable. Insist on the use of best quality wiring devices to insure each installation will be permanent. From the *complete* Cutler-Hammer Line you can select a wiring device for every need. Independent wholesalers stock C-H Wiring Devices. Write us for catalog.



Headquarters of the Schuck Electric Co., Philadelphia, Pa. Mr. Schuck stands beside the Radio Service truck.

CUTLER-HAMMER, Inc.

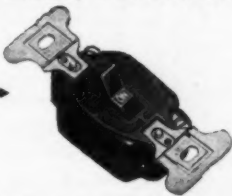
Pioneer Manufacturers of Electrical Apparatus

1258 St. Paul Avenue

MILWAUKEE, WISCONSIN



C-H Catalog 7261 Toggle Flush Switches handle all lamps, including gas-filled bulbs. Built shallow, they are convenient to install in any standard box. Made in single-pole, double-pole, 3-way and 4-way types. Approved by Underwriters.



C-H Catalog 781 "Rubber-Mounted" Toggle Switch. The mechanism—"full-floating" on two resilient rubber cushions—is extremely simple. No screws, and but one rivet. No metal connections to transmit sound. Short, stubby contact blades are heavy to prevent "bounce" and pitting. Heat-proof, crack-proof Thermoplas case protects mechanism from all foreign material. Single-pole, double-pole, 3-way and 4-way types. Approved by Underwriters.



C-H Catalog 7920 Duplex Receptacles are small and shallow—designed for easy handling and quick wiring. Parallel slots are polarized. Contacts are heavy one-piece phosphor bronze doubled to insure firm contact at all times regardless of length of service and to prevent stubbing. Approved by the Underwriters.

CUTLER HAMMER

MODERN WIRING  NECESSITIES

(A-305)

Switches

Manual Operated

T-V

Series	Description	Amps	Volts	2 Pole	3 Pole	4 Pole
4151H1	Light Duty Motor Sw. 1/4HP					
9115H3	or Less Motor Switch with Thermal Cutoff.	30	125	\$ 1.65	.....	.....
4231H	For infrequent Duty.	30	250	.....	\$13.75	\$19.10
4246H	For infrequent Duty 5 HP.	30	220	8.10	9.95	12.85
4246H	For infrequent Duty 5 HP.	30	220	12.45	13.05	16.50
4246H	For infrequent Duty 7 1/2HP	30	440	19.45	23.40	26.55
4246H	For infrequent Duty 7 1/2HP	60	220	17.10	19.45	26.55
4256	Motor Reversing Sw. Dble. Throw.	30	250	13.95	18.90	24.75
4256	Motor Reversing Sw. Dble. Throw.	60	250	17.85	22.05	32.40
4256	Motor Reversing Sw. Dble. Throw.	100	250	29.25	37.35	64.80

Trumbull Electric Closed or Open Ends

Numbers	Amps.	Volts	Fusing	2 Pole	3 Pole
5790 EW Por. Base.....	30	125	For 1 Plug Fuse.....	\$1.65	
5791-2-3-4 & 5893.....	30	125	1 Plug Fuse.....	1.85	\$3.45
5891-5892 Por. Base.....	30	125-250	" " " " " " " "	1.85	2.40
13640-13641 Kappa.....	30	250	No Fuse-Base Base.....		4.10
13642-43 & 13743 Kappa.....	30	250	For Enclosed Fuses.....	2.75	4.35
13221-13321 Quick Break.....	30	250			5.50

Trumbull Electric Non Meter Test Solid End Wall

16361 to 16368.....	30	125-250	For Plug Fuses.....	\$2.70	\$3.45
16371 " 16378.....	30	"	" Enclosed Fuses..	3.05	3.75
16381 " 16388.....	60	250	" " " " " "	8.45	8.90
16391 " 16398.....	100	250	" " " " " "	15.05	15.90

Trumbull Electric For Meters Open End

16300 to 16309.....	30	125-250	For Plug Fuses....	\$ 2.70	\$ 3.45
16315 " 16324.....	30	" "	Enclosed Fuses.	3.05	3.75
16330 " 16338.....	60	" "	" "	8.45	8.90
16341 " 16348.....	100	" "	" "	15.05	15.95

Trumbull Electric With Test Blades Without End Walls

18111.....	30	125	For 1 Plug Fuse....	\$ 3.25	.....
18211-18311.....	30	125	" Plug Fuses.....	3.70	\$4.20
18121.....	30	125-250	" 1 Enclosed Fuse	3.60	.....
18221-18321.....	30	"	" Enclosed Fuses	4.45	4.45
18122-222-322.....	60	"	"	15.05	15.95
18123-223-323.....	100	"	"	23.85	25.00

.....	30	125	For 1 Plug Fuse....\$ 3.05
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19211-19311.....	30	125-250	Plug Fuses....	3.35	\$3.70
19121.....	30	" "	1 Enclosed Fuse	3.60	4.00
19221-19321.....	30	" "	Enclosed Fuses.	4.25	4.25
19122-222-322.....	60	" "	" "	14.15	15.05
19123-223-323.....	100	" "	" "	23.00	23.85

Trumbull Electric With Test Blades Without End Walls

1827	30	125	For 1 Plug Fuse....	\$ 2.20
2111-29211-29311	30	125	* Plug Fuses.....	\$ 3.25
28121	30	125	* 1 Enclosed Fuse..	\$ 3.50
28221-28321	30	125-250	* Enclosed Fuses..	3.75
28122-28222-28322	60	"	"	12.85
28123-223-323	100	"	"	21.25
Without Test Blades				
29111	30	125	For 1 Plug Fuse....	\$ 2.85
29211-29311	30	125-250	* Plug Fuses.....	\$ 3.00
29121	30	125	* 1 Enclosed Fuse..	\$ 3.15
29221-29321	30	125-250	* Enclosed Fuses..	3.50
29122-222 & 322	60	250	* Enclosed Fuses	12.00
29123-223 & 323	60	250	* Enclosed Fuses	20.05
29123-223 & 323	60	250	* Enclosed Fuses	21.20

Trumbull Electric Without End Walls

#071-123.....	30	125	For 1 Plug Fuse.....	\$3.45	.....
972-123.....	30	125	For 1 Plug Fuse.....	4.30	.....
973-333.....	30	125	For 2 Plug " Solid Neu.	\$3.75	.....
975-333.....	30	125	For 3 Combinations....	4.85	4.85
979-333.....	30	125	For 4 Combinations....	4.85	4.85

Trumbull Electric

Series Nos.	Style	30 Amp.		60 Amp.	
		3 Wire	4 Wire	3 Wire	4 Wire
16371	Entrance—"DO-ALI".....	\$ 4.70			
15321-15623	Acc. Fuse—Test Conn.....	11.60	\$15.60	\$21.10	\$37.00
17321-17623	Acc. Fuse without Test Conn.....	10.95	12.80	19.40	22.00
26321-26623	Sealed Fuse with Test Conn.....	11.50	14.40	17.60	33.50

Series Nos.	Style	100 Amp.	
		3 Wire	4 Wire
15321-15623	Acc. Fuse—Test Conn.....	\$30.50	\$47.50
17321-17623	Acc. Fuse without Test Conn.....	05	43.00
26321-26623	Sealed Fuse with Test Conn.....	27.30	44.00

Trumbull Electric

	30 A.	60 A.	100 A.
End Wall One Piece for Standardized Switches.....	\$.30	\$.70	\$.70
End Wall One Piece for Polyphase Switches.....	.40	1.00	1.15
Shutters for End Walls for Standardized Switches.....	.15	.30	.30
Shutters for End Walls for Polyphase Switches.....	.30		
Troughs 2-3" & 4....	\$.40	5".....\$.45	6".....\$.50
			7".....\$.55

Trumbull Single Throw, Quick Make & Break

Amp	230 Volts Fusible			230 Volts—No Fuse	
	2 Pole	AC-DC	3 Pole	AC Only	2 Pole AC-DC
30.....	72221	\$10.95	72321	\$13.65	36221 \$ 9.60
60.....	72222	13.65	72322	18.20	36222 13.30
100.....	72223	20.95	72323	27.30	36223 20.00
200.....	72224	36.40	72324	41.00	36224 25.50

Fusible		No Fuse	
2P 230-575	2P 230-575	2P 575V	2P 230-575
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
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32	32	32	32
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43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
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90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

Amp	2F, 230-573 AC & DC	3F, 230-573 AC Only	2F, 575 V AC & DC	3F, 230-573 AC Only
30.....	72261 \$16.40	72361 \$20.00	36261 \$12.75 *	36321 \$11.40
60.....	72262 17.30	72362 21.00	36262 13.65	36362 15.95
100.....	72263 27.30	72363 31.85	36263 20.95	36363 24.10
200.....	72264 43.25	72364 52.80	36264 28.20	36364 34.60

*230 V. A.C. no "Snuf Arc"

Trumbull Single Throw, Quick Make & Break

Amp	230 V. Fusible				230 V. No Fuse			
	2 Pole	AC-DC	3 Pole	AC Only	2 Pole	AC-DC	3 Pole	AC
30.....	40221	\$ 5.50	40321	\$ 6.85	20221	\$ 5.00	20321	\$ 6.40
60.....	40222	8.20	40322	10.00	20222	8.20	20322	8.65
100.....	40223	12.75	40323	15.50	20223	10.95	20323	12.30
200.....	40224	20.00	40324	26.40	20224	19.10	20324	22.75

Amp	2P 230	AC-DC	3 Pole	230 V.AC	3 Pole	2 Blades	4 Pole	3 Blades
60.....	44222	\$ 8.65	44322	\$10.50	43322	\$ 9.55	43422	\$11.85
100.....	44223	13.20	44323	15.95	43323	15.00	43423	20.95
200.....	44224	20.50	44324	26.85	43324	23.20	43424	32.30

ALL 30 AMP. PORCELAIN BASE

"Midget"—S. N.—1 Blade—1 Fuse—#62162 & 62613	2 Pole	3 Pole
"Type 00"—S. N.—125-250 V.—Plug Fuses.	600950 1.65	\$3.00
—S. N. 60091	1.65	62328 2.70
—S. N. 3 Blades		60962 3.00
—Not Fusible—2 Blades—250 Volt.	60990 2.55	62352 2.70
—3—250		62365 4.00
—Fusible Cart. Fuses—250	60989 2.45	62363 3.20
—S. N. 250 V.		62351 3.20
—3 Blades.		62364 4.30

Westinghouse "WK-62" Quick Break

		2 Pole Fusible	3 Pole Fusible	4 Pole Fusible
60 Amp.—230 Volts	62304	\$ 9.15	62305	\$10.90
100 " —230 "	62308	13.60	62309	17.25
200 " —230 "	62312	21.80	62313	29.05
				47.20

60 Amp.—3 Poles.....	#23332	\$ 9.15	#23306	\$10.90
100 " —3 "	62330	14.55	62310	17.25
200 " —3 "	62331	22.70	62314	29.05

Westinghouse "WK-57" Meter Testing

One & Two Circuit				Four Circuit
57924	\$3.70	All 30 Amp.	57925	\$5.00
57926	4.05	125 Volt For	57499	4.60
57928-31	3.60	Plug Fuses	57928	3.60
57498	5.25		57500	5.25

Westinghouse "WK-54" Without End Walls

Amps.	Fused For Plug	Dead Fuse Type				Live Fuse Type			
		2 Pole		3 Pole		2 Pole		3 Pole	
		No.	Price	No.	Price	No.	Price	No.	Price
30	*	61140	\$ 2.40	59412	\$ 2.95	59442	\$ 3.70		
60	*	61143	3.50	61144	3.75	59451	3.95	60235	3.70
100	Enclosed	61139	8.80	61142	4.30	54471	2.30	60237	4.05
30	*	61145	4.10	61144	4.30			59448	4.05
60	*	61150	12.80	61151	13.65	59461	8.40	60239	8.85
100	*	61152	21.10	61153	22.80	59463	14.95	60232	15.90

ACCESSIBLE FUSE TYPE

[illegible]

POLYPHASE METER SWITCHES

Westinghouse "WK-54"—Sealed Main Fuses

Amps.	No.	3 Pole	230 Volt AC—Less End Wall	Price
30	60266	3	230	\$11.00
60	60267	3	230	16.70
100	60268	3	230	26.30

Westinghouse "WK-65"—Accessible Fuses

Amps.	Meter Test	3Phase 4W.S.N. Non-Meter Test	Price
30	65100	65143	\$15.00
60	65101	65146	35.95
100	65102	65141	46.45

METER TRIMS—END WALLS—TROUGHS

For Meter Switches

Amps.	30 Amp. 60 & 100 Amp.	Price
One Piece Meter Trims		\$0.35
Blank End Wall or Shutter Type End Wall		.35
Shutter Type Meter Trim or Adapter Trim		.15
New Universal Trim with Slide		.35
Replacement Plate or Adapting Plate		.15
Wiring Trough 2-3 & 4" long		.40c—5" .50c—6" .55c—7" .55c—8" .60c
Fuse Receptacle #R57252	Less Fuses	\$1.25

"TYPE A" INDUSTRIAL SWITCHES

Westinghouse "WK-66"—Quick Make & Break

Amps.	2 Pole	3 Pole	2 Pole	3 Pole	Price
30	66100	66101	66102	66103	\$19.95
60	66103	66104	66105	66106	20.90
100	66106	66107	66108	66109	31.75
200	66109	66110	66111	66112	52.65

Amps.	2 Pole	3 Pole	2 Pole	3 Pole	Price
30	66127	66128	66129	66130	\$16.35
60	66047	66048	66049	66050	21.80
100	66056	66057	66058	66059	31.75
200	66059	66060	66061	66062	46.30

"TYPE C" INDUSTRIAL SWITCHES

Westinghouse "WK-97"—Quick Make & Break

Amps.	2 Pole	3 Pole	2 Pole	3 Pole	Price
30	597100	597101	597102	597103	\$18.13
60	597103	597104	597105	597106	19.95
100	597106	597107	597108	597109	36.30
200	597109	597110	597111	597112	51.75

Amps.	2 Pole	3 Pole	2 Pole	3 Pole	Price
30	597010	597011	597012	597013	\$18.15
60	597013	597014	597015	597016	18.15
100	597016	597017	597018	597019	27.25
200	597019	597020	597021	597022	46.65

ENTRANCE SWITCHES

Noark Closed Ends

Number	Amps.	Volts	Fused For	2 Pole	3 Pole	Price
8283-8383-8393	30	125	Plug Fuses	\$1.65	\$2.50	
8683-8693	30	125	N.E.C. Quick Break	1.80	3.20	
8226-1-8136-1	60	250	"	6.65	7.25	
8221-1-8131-1	100	250	"	10.25	11.90	

METER SERVICE SWITCHES

Noark Sealed Service SECO Without End Walls

Number	Amps.	Volts	Fused For	2 Pole	3 Pole	Price
9993	30	125	Plug Fuses	\$2.40	\$3.75	
9543-53-23	30	125	"	3.50	4.65	
9563-9533	30	250	Enclosed Fuses	4.10	4.30	
9573	30	125	"	3.80		
96576	60	230	"	11.90		
66566-536	60	250	"	12.80	13.65	
66561-71-31	100	250	"	21.00	22.85	

Noark Meter Service & Entrance ACCO Without End Walls

Amps.	Fused For	Meter Service Test Type	Entrance Non Test	2 Pole	3 Pole	Price
30A	Plug	9343	9343	\$3.55	\$3.30	\$4.00
30A	Enc.	9353	9353	4.00	3.65	4.00
30A	"	9363	9363	4.85	4.60	4.60
60A	"	9373	9373	3.90	3.90	
60A	"	9386	9386	14.95	14.10	14.95
100A	"	9391	9391	23.70	22.85	23.70

Noark Universal Meter Service Switches

For Detailed Description, see Noark Catalog	No. 971123	—Without End Walls	Price
	9723		\$3.75
	972123		5.00
	973333		4.65
	9753 & 9793		5.65
	975333-979333		5.25

Noark Doall Without End Plate

Amps.	Fused For	Numbers	Price	2 Pole	3 Pole	Price
30A	Plug	913123-911123	\$2.95	912333-914333	\$3.75	
30A	Enclosed	921223	3.30	922333-924333	4.05	
60A	"	921226	8.40	925336	8.90	
100A	"	921221	14.95	925331	15.85	

NUBLADE SWITCHES

Noark Fusible—Quick Break

Amps.	2 Pole	3 Pole	2 Pole	3 Pole	Price
30	8223	8223	8423	8423	\$10.95
60	8226	8226	8426	8426	13.65
100	8221	8221	8421	8421	21.85
200	8222	8222	8422	8422	38.25
400	8224	8224	8424	8424	

Noark Not-Fusible—Quick Break

Amps.	Volts	2 Pole	3 Pole	4 Pole	Price
30	250	8623	8623	8743	\$8.10
30	500 AC	8623	8623	8643	10.80
60	250-500	8626	8626	8646	18.20
100	250-500	8621	8621	8641	27.30
200	250-500	8622	8622	8642	42.75
400	250-500	8624	8624	8644	86.40

ACCESSORIES FOR NOARK SWITCHES

Single Piece End Wall for 30 Amp. Switches	\$3.30	For 60 & 100 Amp.	\$8.00
Shutter for "Doall" & 3 Wire	.15	60 & 100	.30
Universal End Wall No. 909103	.40		
Blanking Side No. 908103-908203	.15		
Trough—3-4 & 5" .40—6" .45—7" .50—8" .55—9" .60			
Cabinet Fuse Block No. 902413	1.25		

POLYPHASE

Noark Switches Without End Walls

Amps.	No.	Price	No.	Price	No.	Price
125-250 Volts						
30A	851233	\$4.70	77033	\$10.50	77533	\$10.40
60A	851236	11.70	77036	18.60	77536	15.05
100A	851231	19.20	77031	28.25	77531	24.75

MAIN ENTRANCE SWITCHES

Noark Doall Without End Walls

Amps.	Fused For	Numbers	Price	Numbers	Price
30	Plug Fuses	813123-811123	\$2.70	812333-814333	\$3.45
30	Enclosed Fuses	853123-851223	3.75	852333-854333	4.30
60	"	853126-851226	8.45	855336	8.90
100	"	853121-851221	15.05	855331	15.95

SOLID NEUTRAL SWITCHES

Noark Fusible—Quick Break

Amps.	Volts	3 Pole-2 Poles	4 Pole-3 Poles	5 Pole-4 Poles	Price
30	125-250	8133	8143	8153	\$9.00
60	"	8136	8146	8156	19.80
100	"	8131	8141	8151	35.55
200	"	8132	8142	8152	50.40
400	"	8134	8144	8154	120.60

BULLDOG SWITCHES

Toggle Type—Quick Make & Break

125 Volt—2 Pole—One Blade	2 Pole—Two	3 Pole—Three	Price
125 " " " " " " " "	" " " " " " " "	" " " " " " " "	\$1.80
115 " " " " " " " "	" " " " " " " "	" " " " " " " "	4.55
115 " " " " " " " "	" " " " " " " "	" " " " " " " "	8.20
125-250 Volts—3 Pole—2 Blades—Solid Neutral	90311		5.00
125-250 " " " " " " " "	91311		7.25
250 Volts—2 Pole—One Blade	90221		1.80
250 " " " " " " " "	90221		5.45
230 " " " " " " " "	90321		8.20
250 " " " " " " " "	91321		7.75
575 " AC 3 " " " " " "	90351		12.75
575 Volts—Not Fusible—2 Pole	93261		5.45
600 " " " " " " " "	93351		7.25
600 " " " " " " " "	93351R		10.90
Motor Starting Switches #81321-81321V			9.15

"TYPE C" NON-INTERLOCKING

Quick Make & Break

Single Throw	Fusible	Type "C"	Price
30 A. Porc. Base..50221S	3.20	50321S	5.15
30 A. End Plates.50221P	3.20	50321P	5.15
30 A. Slate Base.50221	5.40	50321	5.15
60 A. " " " " " " " "	8.20	50322	13.60
100 A. " " " " " " " "	12.70	50323	21.80
200 A. " " " " " " " "	20.00	50324	38.10
400 A. " " " " " " " "	50.225	50325	67.15

Single Throw

Not Fusible

Type "C"

30 A. 2 Pole—250 Volt	3 Pole	4 Pole	Price
30-60 A. DC and 230 Volts	53222	53322	\$5.90
100 A. AC 3 & 4 Pole	53223	53323	12.25
200 A. 230 Volts	53224	53324	22.70
400 A. AC Only	53225	53325	63.50

30 AMP. SERVICE ENTRANCE SWITCHES

Bulldog

2 Pole—125 Volt—Fusible—for Plug Fuses No. 100211 S & P.....	\$1.65
" 125 " " Quick Make & Break 104211S.....	2.75
2 Pole—250 Volt—Fusible—for Cart. Fuses 100221 S & P.....	3.50
2 Pole—250 Volt—Not Fusible—for Cart. Fuses 103221 S & P.....	2.75
3 Pole—115 Volt—Fusible—for Plug Fuses No. 100311 S & P.....	3.00
3 Pole—115 Volt—Fusible—for Plug Fuses Quick Make & Break 104311S	4.35

"TYPE A"

Bulldog Single Throw Quick Make and Break

250 Volts—AC & DC Fusible		2 Pole		3 Pole		4 Pole		
	No.	Price	No.	Price	No.	Price	No.	Price
30 Amp.....	10221	\$10.90	10321	\$13.60	10421	\$16.35		
60 Amp.....	10222	15.00	10322	18.15	10422	21.80		
100 ".....	10223	20.90	10323	27.25	10423	33.30		
200 ".....	10224	30.30	10324	40.85	10424	54.45		
400 ".....	10225	68.10	10325	82.50	10425	107.25		
575 Volts—AC Fusible								
30 Amp.....	10261	\$16.35	10351	\$19.25	10451	\$24.50		
60 ".....	10262	17.25	10352	20.90	10452	26.30		
100 ".....	10263	27.25	10353	31.75	10453	41.75		
200 ".....	10264	42.65	10354	52.65	10454	63.50		
400 ".....	10265	90.75	10355	99.00	10455	128.00		
Not Fusible..... 230 V.—AC, D.C. 575AC, ArcChok 575AC, ArcChok								
30 Amp, 230 Volts only..			13221	\$11.35	13421	\$16.35		
30-60 Amp.....	13222	\$11.80	13352	15.90	13452	21.80		
100 ".....	13223	19.95	13353	24.05	13453	31.75		
200 ".....	13224	25.40	13354	34.50	13454	46.30		
400 ".....	13225	54.45	13355	82.50	13455	107.25		
Fusible.....		600 V.—AC & DC		600 Volt—AC		600 Volt—AC		
30 Amp.....	10261	\$16.35	10361	\$19.50	10461	\$23.60		
60 ".....	10262	17.25	10362	19.95	10462	25.40		
100 ".....	10263	27.25	10363	32.20	10463	39.95		
200 ".....	10264	42.65	10364	49.00	10464	59.50		
400 ".....	10265	90.75	10365	112.60	10465	132.00		
Not Fusible								
30-60 Amp.....	13261-2	\$12.70	13361-2	\$16.35	13461-2	\$21.80		
100 ".....	13263	20.40	13363	24.95	13463	29.95		
200 ".....	13264	27.65	13364	34.05	13464	44.00		
400 ".....	13265	66.25	13365	88.50	13465	110.55		

COMPENSATOR SWITCHES

Bulldog Quick Make & Break Fusible

Amps.		230 Volt AC			
		3 Pole		4 Pole	
30 A.	30321	\$16.35	30421	\$	21.80
60 A.	30322	17.45	30422		26.30
100 A.	30323	28.15	30423		47.20
200 A.	30324	47.90	30424		65.35
400 A.	30325	76.25	30425		118.80

Amps.		575 Volts AC Arc Chokers	
		3 Pole	
30 A.	30351	\$18.35	
60 A.	30352	19.25	
100 A.	30353	29.95	
200 A.	30354	50.85	
400 A.	30355	81.70	

MOTOR STARTERS

Bulldog

				3 Pole	4 Pole
30 Amp.—Type A—230 Volts AC.....				40321 \$16.35	40421 \$22.70
60 " " " 230 " " " " " " " "				40322 22.70	40422 31.75
30 " " " 460 " " " " " " " "				40341 22.70	40441 31.75
60 " " " 460 " " " " " " " "				40342 32.70	

NOTE: For Bulldog Switches not listed deduct 10% from Bulldog Lists.

SMALL ENTRANCE SWITCHES

Columbia, 30 Amp.

Description			2 Pole
Single Fused	Single Blade-125 Volt-Plug Fused		330-331 \$1.50
Double	Double 125 " " "		1980 1.65
"	" " " " " "		3880 1.90
"	" " " " " "	250 Cartridge Fused	332 3.25
"	" " " " " "	250 " " "	422 2.50

Description			3 Pole
Single Fused-Single Blade-125 Volt-Plug Fused			1081-3 \$2.15
Double	Double 125 " " "		3931-2 2.40
"	" " " " " "	250 Cartridge Fused	323 4.00
"	" " " " " "	250 " " "	423 4.40

BRANCH CIRCUIT ENTRANCE SWITCHES

Columbia

30 Amp. Series	2 Circuit		4 Circuit		6 Circuit		8 Circuit	
	2 Pole	2 Pole	3 Pole	3 Pole	2 Pole	3 Pole	3 Pole	3 Pole
2401 to 2406	\$3.90	\$4.00	\$5.20		\$5.85	\$6.20		\$7.15
3401 to 3406	4.90	6.20	6.50		7.15	8.45		9.50
3501 to 3506	4.75	5.85	6.20		6.90	7.50		8.45

Series 30—Quick Break—250 Volts for Meter Trims
For Cartridge Fuses

	30 Amp.	60 Amp.	100 Amp.	200 Amp.
2 Pole.....	3022 \$5.55	3025 \$ 8.75	3028 \$12.50	3031 \$18.20
3 Pole.....	3023 7.50	3026 10.00	3029 16.15	3032 24.00

INDUSTRIAL SWITCHES

Columbia

Series 70 Type C Fusible					
	Amps	2 Pole		3 Pole	
		Number	Price	Number	Price
250 Volts	30A	C7001	\$ 9.30	C7002	\$11.30
Fusible	60A	C7004	12.00	C7005	15.50
Quick Make	100A	C7007	18.85	C7008	23.65
& Break	200A	C7010	27.95	C7011	34.65

Series 70 Type A Fusible					
	Amps	2 Poles	3 Poles		
		Number	Price	Number	Price
250 Volts	30A	A7001	10.30	A7002	\$12.85
Fusible	60A	A7004	13.10	A7005	17.30
Quick Make	100A	A7007	21.45	A7008	27.50
& Break	200A	A7010	30.50	A7011	28.35

	Series 71-500 Volts Fusible			
	Amps	2 Pole	3 Pole	Price
500 Volts	30A	7101	7102	\$15.50
Jeick Make	60A	7104	7105	16.00
& Break	100A	7107	7109	26.65
	200A	7110	7111	42.25

Series 73-500 Volts Unfused					
Amps			2 Pole		
	Number	Price	Number	Price	
500 Volts Quick Make & Break	30A	7301	\$10.80	7302	\$12.70
	60A	7304	10.50	7305	13.25
	100A	7307	17.15	7308	19.20
		7302			

Series 72-600 Volts Fusible				
	Amps	2 Pole		3 Pole
		Number	Price	Number
600 Volts	30A	7201	\$14.60	7202
Quick Make	60A	7204	14.60	7205
& Break	100A	7207	24.10	7208
				Price
				\$16.05
				16.60
				27.15

	200A	7210	38.60	7211	42.50
Series 74-600 Volts Unfused					
	Amps	2 Pole	Price	3 Pole	Price
600 Volts	30A	7401	\$11.70	7402	\$14.35
Quick Make	60A	7404	12.45	7405	14.95
Breaker	100A	7407	18.90	7408	24.95

	300A	7410	25.15	7411	29.25
	Series 20-250 Volts Fusible				
	Amps	2 Pole		3 Pole	
		Number	Price	Number	Price
Quick Break	30A	2022	\$ 5.10	2023	\$ 6.85
Only	60A	2025	6.85	2026	7.90

350 Volts	100A	2028	10.85	2029	13.35
	300A	2031	19.10	2032	23.85
Series 23-250-500 Volts Unfused					
	Amps	2 Pole		3 Pole	
		Number	Price	Number	Price
Quick Break Only	30A	3322	\$ 4.75	3323	\$ 6.25
	60A	3325	8.95	3326	9.50

MOTOR STARTING SWITCHES

Columbia, 250 Volts

		2 Pole		3 Pole
30 Amp. Motor Start Switch.....	6001	\$12.50	6002	\$16.70
60 " " " " " " " " " " " " " "	6004	13.10	6005	17.25
				4 Pole
30 Amp. Motor Start Switch.....			6003	\$19.65
60 " " " " " " " " " " " " " "			6006	26.80

Wadsworth Switches

MAIN ENTRANCE SWITCHES

MAIN ENTRANCE SWITCHES							
Single Phase and D. C.	Amps.	Volts	Poles	Blades	Fuses 1 Plug	Accessible Neutral Solid	Fuses \$ 3.55
1450-1350	30	125	2	1	"	"	3.55
1402-1202	30	125	2	2	"	None	3.90
1403-1203	30	125-250	3	2	2	Solid	4.25
2250	30	125	2	1	1 NEC	"	4.15
2202	30	250	2	2	2	None	4.85
2203	30	125-250	3	2	2	Solid	4.85
1800	60	125	2	1	1	"	13.90
1802	60	125 or 250	2	2	2	"	14.75
1803	60	125-250	3	2	2	None	15.65
1900	100	125	2	1	"	"	22.60
1902	100	125 or 250	2	2	"	None	23.45
1903	100	125-250	3	2	2	Solid	24.35
4603	200	125-250	3	2	2	"	44.50
4903	400	125-250	3	2	2	"	93.00



His Colt got the snake and won the friendship of Buffalo Bill

Once when the West was young a stranger caught up with Buffalo Bill in camp on the trail. Cody greeted him gruffly, for in those days mutual strangers were naturally suspicious. Hurt by the scout's cold reception his admirer started to prepare supper when he sighted a rattlesnake slowly crawling toward the figure of the famous buffalo hunter squatting over a cook-fire. Out came his Colt . . . he got the snake and won the friendship of Buffalo Bill.

The West was full of such tales in its early days when the faithful Colt stood for protection.

COLT
NOARK

In this modern age, users of electrical equipment have Colt protection—in an other form—but Colt protection just the same. Through the NOARK line of safety switches and meter protective devices, Colt is bringing to the electrical industry an old established line of products, strengthened by Colt precision methods of manufacture. Watch-like methods of precision, made possible by Colt's rare ability to manufacture things mechanical, assure to electrical users the highest form of protection and safety.

COLT'S PATENT FIRE ARMS MFG. CO.,
Established 1836

Electrical Division, HARTFORD, CONN., U.S.A
Electrical Division 1886

AND SO IS NOARK

NOARK Safety Switches, Fuses and Cast Iron Boxes—Industrial plants.
All NOARK products—Contractors.
NOARK Meter Switches, Cast Iron Fuse and Service Boxes and Underground Distribution boxes—Central Stations.



WINNING FRIENDS

And the reliability, acceptability and Salability of the NOARK line—Jobbers.
Send for Catalog "G" and detailed description.
"The Rampant Colt," an interesting publication, mailed on request.

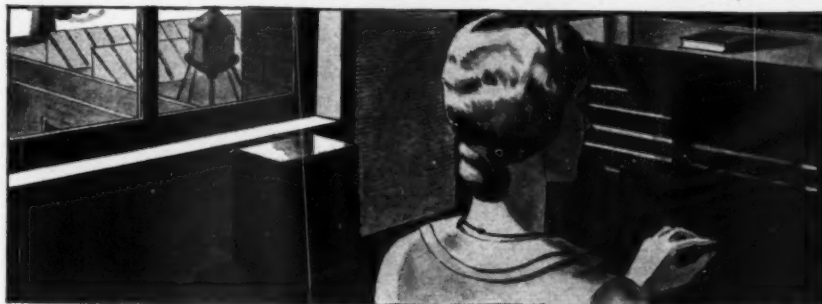
Tune in on the Graybar Program, at 10 P. M. Eastern Daylight Saving Time, every Tuesday Columbia Broadcasting System

"Mr. Benson!"



"Nurse
wanted!"

"12 o'clock!"



"Jones, report
to main office"

... Install these signals

... And take advantage of the almost unlimited market for these time and money saving signalling devices. Graybar signals meet *every* interior communication need in schools . . . offices . . . industrial plants. Or *any* large building. And installation brings the contractor three-fold profits . . . on installation . . . on equipment . . . and on other jobs that may follow in the same building. Information? See coupon.

----- COUPON -----

Graybar Electric Co., Graybar Building, New York, N. Y. E C. 9

Gentlemen: We are interested in knowing more about SIGNALLING devices.

Name _____

Address _____

GraybaR

OFFICES IN 76 PRINCIPAL CITIES. EXECUTIVE
OFFICES: GRAYBAR BLDG., NEW YORK, N. Y.

"Set my Dial and
let me do the rest"



"Put Down 1—and
Carry 2"

No. 1 is the "off" arm [Black]. Press the button and set it for "lights out."
No. 2 is the "on" arm [Red]. Lift it and click it into the right hole for "lights on."

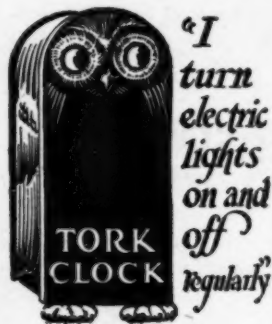
Retail Merchants—large and small—
use me as above



For all night service from street lights
to hallways, set me something like this



Out on the farm, they set me this way
to get more winter eggs



"I am used in more places
than ever before"

STORES that do not keep open evenings used to have to start advertising all over again in the morning. I changed all that by making it possible for every storekeeper to get a Tork Clock from his own electrician. After that they let me keep shop for them from closing time until bed time.

Long ago, in street lighting, it became necessary to handle the lighting-up automatically in order to insure regularity. Now Tork Clocks are so easily obtainable that I am up all night on all kinds of jobs from hallway lighting to freight yard flood lighting and the control of remote traffic signals.

When winter approaches on the poultry farm they tune me up to get enough eggs to last through the high priced market. If you don't know how this works you are simply not in the egg producing business.

Now all kinds of heating plants are becoming so modern that I can start them up and close them down as well as manage them according to the weather.

And wherever you find an old Tork Clock you will find a market for a new one if it has been in service long enough. I make friends in a simple way. I am simple. It is a simple matter to replace any part of me.

TORK CLOCKS

Like most other successful machines, I am made better today than ever before. I do more things for less money.

Always have my latest bulletin handy.

If it isn't handy now, address:

TORK CLOCKS, Inc., 12 East 41st St., NEW YORK

Factory and Service Department now consolidated at

LINDEN, N. J.

What About Bearings?



Ball and sleeve bearings both have advocates. Experience has proven that each type of bearing has applications where it is best. Wagner builds both . . . take your choice. If uncertain about which type of bearing is best for a given application, ask for Wagner experience that can be applied to your problem.



Wagner, Quality



There is a right Wagner Motor for every job, because Wagner builds every commercial type of a. c. motor.
Literature on Request

WAGNER ELECTRIC CORPORATION

6400 Plymouth Ave., St. Louis

Sales and Service in 25 Principal Cities

PRODUCTS . . . FANS . . . DESK . . . WALL . . . CEILING
TRANSFORMERS . . . POWER . . . DISTRIBUTION . . . INSTRUMENT
MOTORS . . . SINGLE-PHASE . . . POLYPHASE . . . DIRECT CURRENT

Wadsworth Switches—Continued

MAIN ENTRANCE SWITCHES—Continued									
POLYPHASE									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Accessible Fuses	Price	
2230	30	250	3	3	3 NEC	None		\$10.40	
1830	60	250	3	3	3			19.10	
1930	100	250	3	3	3			25.70	
4630	200	250	3	3	3			44.50	
4830	400	250	3	3	3			101.00	

METER SERVICE SWITCHES									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Accessible Fuses	Price	
1451	30	125	2	1	1 Plug	Solid		\$ 3.80	
1412-1212	30	125	2	2	2	None		4.25	
1423-1223	30	125-250	3	2	2	Solid		4.75	
2251	30	125	2	1	1 NEC			4.15	
2112-2223	30	125 or 250	2 & 3	2	2	None & Solid		5.05	
1851	60	125	2	1	1	Solid		14.75	
1812-1842	60	125 or 250	2	2	2	None		15.65	
1843	60	125-250	3	2	2	Solid		16.30	
1951	100	125	2	1	1	Solid		24.35	
1912-1942	100	125 or 250	2	2	2	None		24.35	
1943	100	125-250	3	2	2	Solid		26.10	
4643	200	125-250	3	2	2			51.75	
4843	400	125-250	3	2	2			109.15	

POLYPHASE									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Accessible Fuses	Price	
2234	30	250	3	3	3 NEC	None		\$11.25	
1834	60	250	3	3	3			20.85	
1934	100	250	3	3	3			30.45	
4634	200	250	3	3	3			60.65	
4834	400	250	3	3	3			129.35	

CHANNEL BANKING TYPE									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Access. Fuses	Price	
125-250	2	1	1 Plug	Solid	1451T		\$4.25	1450T	\$ 4.05
125-250	3	2	2	None	1423T		5.20	1403T	4.55
125-250	2	2	2	None	1412T		4.70	1402T	4.35
250-250	2	2	2	None	2251T		4.55	2250T	4.40
125-250	3	2	2	Solid	2212T		5.55	2202T	5.25
					2223T		5.55	2203T	5.25

METER SERVICE SWITCHES									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Sealed Fuses	Price	
162	60	250	2	2	2 NEC	None		\$ 9.15	
161	60	125-250	3	2	2	Solid		9.55	
112	100	250	2	2	2	None		15.65	
111	100	125-250	3	2	2	Solid		16.50	

SERVICE FUSES DEAD WITH SWITCH OPEN									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Sealed Fuses	Price	
38	30	125	2	1	1 Plug	Solid		\$ 2.65	
238	30	125	2	1	1			4.00	
X360	30	125	2	1	1			4.45	
X362	30	125	2	1	1			4.45	
272	30	125	2	2	2	None		4.30	
271-292	30	125-250	3	2	2	Solid		4.30	
2351	30	125	2	1	1 NEC			4.05	
2312	30	250	2	2	2	None		4.35	
2323	30	250	2	2	2	Solid		4.55	
2051	60	125	2	1	1	Solid		12.60	
2042	60	125 or 250	2	2	2	None		13.50	
2043	60	125-250	3	2	2	Solid		14.35	
2151	100	125	2	1	1	Solid		21.75	
2142	100	125 or 250	2	2	2	None		21.75	
2143	100	125-250	3	2	2	Solid		23.45	
4743	200	125-250	3	2	2			44.45	
4943	400	125-250	3	2	2	None		101.00	

POLYPHASE									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Sealed Fuses	Price	
2334	30	250	3	3	3 NEC	None		\$ 9.85	
2034	60	250	3	3	3			17.40	
2134	100	250	3	3	3			26.95	
4734	200	250	3	3	3			49.75	
4934	400	250	3	3	3			113.00	

MAIN ENTRANCE SWITCHES									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Sealed Fuses	Price	
172	60	250	2	2	2 NEC	None		\$ 9.15	
171	60	125-250	3	2	2	Solid		9.30	
102	100	250	2	2	2	None		15.65	
110	100	125-250	3	2	2	Solid		16.50	

POLYPHASE									
Single Phase and D. C. Number	Amps.	Volts	Poles	Blades	Fuses	Neutral	Sealed Fuses	Price	
2330	30	250	3	3	3 NEC	None		\$ 9.15	
2030	60	250	3	3	3			15.60	
2130	100	250	3	3	3			25.15	

INDUSTRIAL TYPE SWITCHES									
250 Volts	Amps.	Poles	Blades	Fuses	Access. Fuses	Sealed Fuses	Quick Make & Break	Price	
30	2	2	2	2	9532	\$13.65	8532	\$ 8.45	
30	3	3	3	3	9533	15.50	8533	9.75	
60	2	2	2	2	9562	14.65	8562	8.90	
60	3	3	3	3	9563	18.55	8563	10.20	
100	2	2	2	2	9512	25.00	8512	12.45	
100	3	3	3	3	9513	28.80	8513	15.55	

OUTDOOR METER SERVICE SWITCHES									
30 Amp. 3 Pole Solid Neutral Outdoor or Weatherproof									
60	3							\$15.10	
								20.40	

EXTRA END WALLS—SHUTTERS—TRIMS—ETC.									
Wadsworth									
Type of Trim									
For 30 Amp. 125 Volt Switches	Flat	Extended	Shutter	Knock-out	Meter	Shutter	Shutter	Shutter	Shutter
" 30	\$.30	\$.50	\$.30	\$.30	\$.30	\$.30	\$.30	\$.30	\$.30
" 60	.50	.85	.50	.50	.50	.50	.50	.50	.50
" 60	.65	.83	.65	.45	.25				
" 60	.75	.90	.75	.50					
" 100	.82	1.00	.82	.45					
" 100	.90	1.10	.90	.50					
" 200	1.00	1.15	1.00	.50					
" 300	1.10	1.25	1.10	.55					

Murray Switches

ENTRANCE SWITCHES

30 Amp. Number	Volts	Description	With End Walls	
630	125	1 Blade—1 Plug Fuse S. N.	2 Pole 3 Pole	
231-230	125-250	2 " —2 "	\$1.60	\$2.40
641-2-6	125	For 1 HP—250 V.—AC & DC Motors	1.80	
643	230	3 Blades 3 Cartridge Fuses	3.20	
647	125-250	2 " 2 " S. N.	2.50	
830	125-250	2 " 2 " Sealed Fuses S. N.	4.00	
831	125-250	2 " 2 Plug Sealed Fuses S. N.	2.25	

Accessible Main Fuses				With Branches Combined	
				Without End Walls	With End Walls
780-782	125-250	2 Plug Fuses 2-2 Wire Branches		\$5.80	\$6.80
781-783	125-250	4 " 4-2 "		6.55	7.55
784	125	2 " 1-2 "		6.60	.....
785	125	4 " 2-2 "		7.30	.....

ACCESSIBLE MAIN FUSE TYPE AA									
Amps.	Poles	Fused for	Neutral	No.	Price	No.	Price		
30	2	1 Plug	Fused	755	\$3.25	754	\$3.05		
30	2	1 Cart.	"	738	4.20	740	3.60		
30	2	2 Plug	"	748	3.70	752	3.35		
30	2	2 Cart.	"	737	4.50	757	4.25		
30	3	2 Plug	Solid	756	4.20	753	3.70		
x30	3	2 Cart.	"	742	4.45	758	4.25		
x30	2	1 Plug	Fused	776	3.25	774	3.05		
x30	2	2 Plug	Solid	775	4.20	779	3.70		
x30	3	2 Cart.	"	777	4.45	778	4.25		
60	2	1 Cart.	Fused	766	14.20	773	15.05		
60	2	2 Cart.	"	764	15.05	762	14.20		
60	3	2 Cart.	Solid	765	15.95	763	15.05		
100	2	2 Cart.	Fused	760	23.85	768	22.10		
100	2	2 Cart.	"	718	23.85	716	23.00		
100	3	2 Cart.	Solid	719	25.60	717	23.85		

x—Made with cover to permit sealing fuses independent of main cover.

POLYPHASE ENTRANCE & SERVICE					
Entrance Amps.	No.	Description	With End Walls		
			3 Wire	4 Wire	
30	790-2	Three Legs Fused	\$11.00	\$11.60	
60	760-9	Four Wire Solid Neutral	19.44	20.00	
100	710-12	All 3 Pole 3 Phase	29.05	29.95	
200	730-22		44.55	51.85	
Service Amps.					
30	791-3	Three Legs Fused	\$11.60	\$15.60	
60	767-8	Four Wire Solid Neutral	20.70	23.80	
100	711-14	All 3 Pole 3 Phase	30.80	33.25	
200	721-23		61.85	90.75	

"UNISAFIT"						
(Universal Standardized Switches)						
All 30 Amps.						
Number	Pole	Fuse	Neutral	Branches & Fusing		Price
235B	2	Single		2-2-Wire	2 Fuses	\$3.25
236	3	"		4-2 "	"	4.30
237	2	Two	Solid	1-3 "	"	3.75
237	2	"		1-3 "	"	3.75
237	3	"	Solid	2-2 "	"	3.75
238	3	"	Solid	4-2 "	"	4.85
238	2	"		2-2 "	"	4.85

PL-28

Tape

FRICITION TAPE—Concluded

	Per Pound	Per Half Pound	Per 2 Ounce	Per 1 Ounce	Per Foot
Dutch Brand	\$.65	\$.35	\$.10	\$.05	\$.01
Everatick	.60	.30	.10	.05	.01
Eaco	.95	.50	.15	.10	.02
G. E.	.55	.30	.10	.05	.01
Grimshaw	2.00	1.00	.25	.15	.03
Holdfast	1.00	.50	.15	.10	.01
Holdite U. S.	.55	.30	.10	.05	.01
I X L	.75	.40	.10	.05	.01
Illinois	.55	.30	.10	.05	.01
Johns Manville Armature	1.75	.90	.20	.10	.02
" " Jomanco	1.00	.55	.15	.10	.02
" " White	1.35	.70	.20	.10	.02
" " No. 8 Now No. 5	.65	.30	.10	.05	.01
" " No. 6 " 40	.60	.25	.10	.05	.01
Jaxon	.60	.30	.10	.05	.01
Leader	.70	.35	.10	.05	.01
Manson	1.25	.65	.20	.10	.02
Magnet	.75	.40	.10	.05	.01
O. K.	.60	.30	.10	.05	.01
P & B	1.00	.50	.15	.10	.02
Paragon	1.65	.85	.20	.10	.02
Service	.90	.45	.15	.10	.02
Stanpat	.55	.30	.10	.05	.01
Sticks	.50	.25	.10	.05	.01
Security	.45	.25	.10	.05	.01
Victor	.55	.30	.10	.05	.01
Vim Grav	1.10	.60	.15	.10	.02

RUBBER TAPE

	Rubber	\$0.95	\$.50	\$.15	\$.10	\$.04
Amaxon		1.20	.60	.15	.10	.04
Alexall		1.00	.50	.15	.10	.04
Alpha		.85	.35	.10	.05	.03
Brooklyn		.65	.35	.10	.05	.03
Clifton		.65	.35	.10	.05	.03
Dutch Brand		.65	.35	.10	.05	.03
Eleco		.69	.30	.10	.05	.03
G. E.		.55	.30	.10	.05	.03
Graybar Victor		.55	.30	.10	.05	.03
Holdfast		1.00	.50	.15	.10	.04
Imperial		.60	.30	.10	.05	.03
Illinois		.60	.30	.10	.05	.03
Okonite		1.50	.80	.20	.10	.04
Para		.75	.40	.10	.05	.03
Pittsburgh		.55	.30	.10	.05	.03
Relio U. S.		.50	.25	.10	.05	.03
Security		.55	.30	.10	.05	.03
U. S. Rubber		.85	.35	.10	.05	.03
Twin Tape Rubber & Friction		.75	.40	.10	.05	.03
USCO Westinghouse		.90	.50	.15	.10	.04

COUCH TELEPHONES

VESTIBULE TYPE

No. 74 Armored Cord Receiver Type	\$25.00
No. 74A Swing Arm Receiver Type	\$27.30
No. 74C Cordless Loud Speaker Type	\$30.75
Above prices are for telephones complete but do not include for any call buttons.	
Add for buttons—Janitor Calling Buttons if fitted	\$.95
Add for Each Suite Calling Button	\$.95

SUITE TELEPHONES

Series 2800 to 2840 or 1900 to 49	Page 22 Bulletin No. 89 S. H. Couch Co.
Number of Buttons	0 1 2 3 4
Price Ea. Surface or Flush	\$11.40 \$11.40 \$12.45 \$13.60 \$14.60

TELEPHONE CABLES

Number of Conductors	Braided Type "B"		Lead Covered Type "L"	
	Number	Price per Foot	Number	Price per Foot
8	B-8	\$.14	L-8	\$.18
12	B-12	.15½	L-12	.21
16	B-16	.18	L-16	.27
21	B-21	.22	L-21	.29
25	B-25	.24	L-25	.32
31	B-31	.27	L-31	.39
37	B-37	.30	L-37	.44

TIME SWITCHES

GENERAL ELECTRIC TIME SWITCHES

Type T-8B 15 Amp. Indoor Service Single Pole				Type T-9 20 Amp. In or Outdoor Service Double Pole			
Type	Cat. No.	Price	110 V. 220 V.	Type	Cat. No.	Price	110 V. 220 V.
T-8-B1	30x458 to 471	\$22.00	\$23.00	60 Cycle	10x637 & 38	\$44.00	\$45.00
T-8-B2	30x460 to 473	22.00	23.00	50	10x639 & 40	41.00	42.00
T-8-B3	30x462 to 475	22.00	23.00	Extra for Cutouts		4.00	4.00

HARTFORD TIME SWITCHES

Type	B Single or Double Pole	10 Amp.	20 Amp.	35 Amp.	50 Amp.
B Triple Pole		\$38.00	\$39.00	\$42.00	\$50.00
C & D Single or Double Pole		39.00	42.00	47.00	52.00
C & D Triple Pole		41.00	45.00	49.00	
G Apt. Hall Light Control D. P.		38.00		60.00	

HOROLELECTRIC TIME SWITCHES

60 Amp. D. P. Eight Day Time Switch and Box	\$24.00
60 " " Automatic Electric Time Switch with Automatic Electric Time Motor and Box	32.00
Eight Day Time Motor	12.00
Automatic Electric Time Motor	20.00

RELIANCE & RACINE SWITCHES

	10 Amp.	20 Amp.	30 Amp.	50 Amp.
Racine Type 1R-2R	\$19.50	\$23.00		
Reliance Type 10-20-30-50	28.00	30.00	\$32.00	\$36.00
Reliance Type 16 Triple Pole		32.00		
Apartment House Types A-B-C-D-E-F-G	30.00	30.00		

SANGAMO TIME SWITCHES

All 20 Amp. 115 V.—15 Amp. 230 V.			
	A. C.	D. C.	D. C.
T or TC 1 Single Pole Single Throw	115-230V \$40.00	115 Volt \$45.00	230 Volt \$47.50
T " TC 1 " Double " "	42.50	47.50	50.00
T " TC 2 Double " Single " "	45.00	50.00	52.50
T " TC 2 " Double " "	47.50	52.50	55.00

SAUTER TIME SWITCHES

All 115-230 Volt A. C. & D. C. Single Throw			
No.	Amps.	Description	Price
101	2	1 Clock operated, key wound 40 day clocks	\$2.00
111	10	" " " " " 40 " "	\$6.00
121	15	" " " " " 40 " "	\$6.00
201	2	1 Self winding	\$4.00
211	10	1 " " " " " " "	\$8.00
221	10	2 " " " " " " "	\$8.00
321	25	2 Motor operated self winding clocks	\$105.00
341	40	2 " " " " " " "	\$110.00
401	100	2 Motor operated Oil Break self winding clocks	\$190.00
431	200	2 " " " " " " "	\$250.00
461	300	2 " " " " " " "	\$280.00

TORK TIME SWITCHES OR CLOCKS

Single	Description	Indoor	Outdoor	Switchboard
Double	Pole 15 Amp. 125 Volt	#115H \$20.00	#215H \$27.50	#015H \$17.50
Single	" 30 " 250 "	#130H 25.00	#230H 32.50	#030H 22.50
Single	" Double Throw	#166H 25.00	#266H 32.50	#066H 22.50
Contractor and Clock Combination				
#76062-	60 Amp. 2 Pole A.C.	\$50.00	#75062- 60 Amp. 2 Pole D.C.	\$ 70.00
#76102-100	" " " " " " "	75.00	#75102-100 " " " " "	125.00

ZENITH TIME SWITCHES

	10 Amp.	20 Amp.	30 Amp.	60 Amp.	100 Amp.	200 Amp.
Model #110—8 Day	\$20.00	\$23.00	\$25.00			
Electric Wound—AC		40.00				
—DC		45.00				
Astronomic Dial—AC	79.00					
—DC	84.00					
Remote Con. Swchs.		16.50	\$22.50	\$42.50	\$75.00	
—DC		23.50	38.00	55.00	93.00	

TRANSFORMERS

BELL & TOY TRANSFORMERS

Name	Style	Watt	Secondary Volts	50 to 133 Cycle		25 to 40 Cycle	
				No.	Price	No.	Price
ED- WARDS	Steel Clad Bell	25	Single	86	\$ 1.25	86	\$ 1.45
	" "	25	Single	86T	1.55	86T	1.75
	Porcelain Bell	25	Single	87	1.55	87	1.75
	Out. Box Bell	25	" "	86ER	1.55	86ER	1.75
	Heavy Duty	50	8-16-24	88	4.25	88	4.65
	" "	75	" "	89	6.40	89	7.00
	" "	100	" "	90	7.40	90	8.15
	Tor	50	3 to 18	870	3.50	870	4.20
	" "	75	3 to 24	871	5.85	871	7.00
	" "	100	2 to 30	872	8.75	872	10.50
<hr/>							
G. E.	Bell Residence		12 Volt	2332	1.00	192340	1.45
	Box Type		12 "	2458	1.40	2490	1.75
	Heavy Duty	50	8-16-24	2333	4.85	2339	7.00
	" "	100	10-20-30	2334	6.95	2340	11.20
<hr/>							
JEF- FERSON	Wizard	25	10 Volt	230-101	1.00	230-102	1.15
	Nuclide	25	10 Volt	230-111	1.40	230-112	1.65
	Tri-Volt	25	6 to 18V.	230-121	1.40	230-122	1.65
	Porcelain		" "	230-131	1.40		....
	Little Jeff Toy	50	5½-13	535-101	3.65	535-102	4.30
	Midget Toy	75	5½-22	535-121	4.45	535-122	5.50
	Model 2 Toy	100	5½-23	535-131	6.75	535-132	8.40
	Model 3 Toy	150	1-30	535-141	8.65		....
	Heavy Duty A	50	6 to 20	231-101	5.10	231-102	7.25
	" " B	75	6 to 20	231-111	7.70	231-112	10.30
" " G	100	6 to 24	231-171	8.90	231-172	10.00	
" " E	250	8 to 24	231-141	21.00	231-142	26.40	

NOTE: For 220 Volt Transformers add 20% to above prices.

Wires

Wires

WIRES

NEW CODE RUBBER COVERED WIRES

Special Price on No. 14 S.B. Wire

In less than Coil Lots	Per Foot
In Coil Lots	.01
Other Sizes	
Fixture Wire Light	No. 18 .01 No. 16 .01 No. 14 .01
" Heavy	.01 .01 .01
Solid Single Braid	.01 .01 .01
" Double	.01 .01 .01
Stranded Sgl. Braid	.01 .01 .01
" Dble.	.01 .01 .01
Duplex Single Braid	.03
" Double	.04
Other Sizes	
Fixture Wire Light	No. 12 No. 10 No. 8 No. 6
" Heavy	.01 .01 .01 .01
Solid Single Braid	.01 .01 .01 .01
" Double	.02 .02 .02 .02
Stranded Sgl. Braid	.02 .02 .02 .02
" Dble.	.02 .02 .02 .02
Duplex Single Braid	.04 .04 .04 .04
" Double	.05 .05 .05 .05

LARGER SIZES DOUBLE BRAID STRANDED

Size	Price	Size	Price
No. 8 D. B.	Per Foot .04	No. 0	Per Foot .17
No. 6 D. B.	.05	No. 00	.20
No. 4 D. B.	.07	No. 000	.24
No. 3 D. B.	.08	No. 0000	.30
No. 2 D. B.	.10	250,000	.35
No. 1 D. B.	.14		

CIRCULAR MILL CABLE

Size	Price	Size	Price
300,000 C. M.	Per Foot .40	700,000 C. M.	Per Foot .90
350,000 C. M.	.46	750,000 C. M.	1.05
400,000 C. M.	.51	800,000 C. M.	1.10
450,000 C. M.	.57	900,000 C. M.	1.10
500,000 C. M.	.63	1,000,000 C. M.	1.25
600,000 C. M.	.78		

Additions to Code Wire for 25% (Intermediate Grade) and 30% Wire.

Sizes	For Intermediate	For 30% Wire
From No. 14 to No. 1	5%	10%
From No. 1 0 to 4 0	3%	6%
From 250,000 to 400,000 CM.	2%	5%
From 500,000 to 1,000,000 CM.	1 1/2%	3%

WEATHERPROOF WIRE

Triple Braid

No. 18	No. 16	No. 14	No. 12	No. 10	No. 8	No. 6
Per Pound Solid	.60	.56	.52	.50	.44	.41
" Stranded	.01	.01	.02	.02	.03	.04
Per Foot Solid	.01	.01	.02	.02	.03	.04
" Stranded	.01	.01	.02	.02	.03	.04
Number Feet Per Pound	70	50	40	30	20	13

EXTRAS—For slow burning W. P. Wire—Per Pound Extra. .01
 For Twisted Pair W. P. Wire—Per Pound Extra. .02
 For Double Braid W. P. Wire—Per Pound Extra. .01
 For Medium Hard Draw—Per Pound Extra. .00 1/2
 For Armored Cables See Page PL-9.

ANNUNCIATOR—TELEPHONE WIRE, ETC.

Description	No. 18	No. 16	No. 14	No. 12
Single	Per Foot .01	Per Foot .01	Per Foot .01	Per Foot .01
Twisted or Duplex	Per Foot .01	Per Foot .01	Per Foot .01	Per Foot .01
Office & Damp Proof Wire				
Single	Per Foot .01	Per Foot .01	Per Foot .01	Per Foot .01
Twisted or Duplex	Per Foot .01	Per Foot .01	Per Foot .01	Per Foot .01
"Deltabeston" or similar				
Single Stranded Black Per Foot	.03	.03	.03	.03
Single Stranded Colored Per Foot	.03	.03	.03	.03
Single Glazed Cotton Per Foot	.03	.03	.03	.03
Single Artificial Silk Per Foot	.04	.05	.05	.05
Duplex Glazed Cotton Per Foot	.07	.08	.09	.09
Duplex Artificial Silk Per Foot	.08	.09	.10	.10
Twisted Pair Glazed Cotton Per Foot	.07	.08	.10	.10
Twisted Pair Artificial Silk Per Foot	.08	.09	.10	.10

Asbestos Range Wire

Description	No. 18	No. 16	No. 14	No. 12	No. 10	No. 8
Asbestos Range Wire or Switch Board	.07	.08	.09	.10	.12	.14
Wire Single Solid—Per Foot	.07	.08	.09	.10	.12	.14

COVERED TELEPHONE WIRES

No.	Size	Per Foot
No. 22	1/2 Twin Pair Plain Pothead Copper Wire	.03 1/2
No. 22	1/2 Twin Pair Flame Proof Copper Wire	.04
No. 22	1/2 B & S Twin Pair West. Elect. Flameproof Jumper Wire (Enam.)	.06
No. 19	1/2 Twin Pair Flame Proof Copper Wire	.04
No. 19	1/2 Twin Pair Dry Braid Interior Copper Wire (Olive)	.02
No. 19	1/2 3 Conductor Ditto	.03
No. 18	1/2 Twin Pair, Bridlewire, Saturated Braid	.03
No. 14	1/2 Twin Pair Outside of Bridge Saturated Braid	.04

Note—For Prices of Sgl. Conductor use 1/2 of above prices per foot.

GALVANIZED TELEPHONE WIRE

Size BWG	No. 4	No. 6	No. 8	No. 10	No. 12	No. 14
EBB Extra Best	Per Pound .12	.12	.12	.12	.12	.12
B. B. Best Best	.11	.11	.11	.11	.11	.11
Steel	.10	.10	.10	.10	.10	.10
Weight Per 1000 Feet	153	112	74	49	32	19
Weight Per Mile	811	590	390	258	170	99

WIRE, MAGNET

Price Per Pound

Size	Single Cotton	Double Cotton	Single Silk	Double Silk	Plain Enamel	Enamel Cotton	Enamel Double Cotton
8	.63	.66	.63	.67	.63	.67	.70
10	.65	.68	.65	.69	.65	.69	.72
12	.67	.72	.67	.72	.67	.72	.76
14	.72	.74	.72	.74	.72	.74	.80
16	.72	.76	1.02	1.26	.68	.76	.82
18	.78	.83	1.11	1.40	.72	.81	.90
20	.83	.90	1.24	1.60	.74	.90	1.00
22	.93	1.04	1.33	1.65	.76	.96	1.10
24	1.00	1.22	1.46	1.83	.80	1.05	1.30
26	1.10	1.37	1.60	2.04	.83	1.24	1.50
28	1.28	1.70	2.00	2.44	.90	1.40	1.80
30	1.60	1.86	2.15	3.30	.95	1.70	2.00
32	1.78	2.43	2.80	4.64	1.02	1.90	2.62
34	2.22	3.15	3.68	6.53	1.13	2.52	3.42
36	2.88	4.08	5.22	8.53	1.30	3.24	4.80
38	5.06	7.60	8.36	13.90	1.54	5.55	8.00
40					1.86		

NOTE: For odd sizes use half the increase of next larger size.

For 1/2 lb. lots use one third of above prices.

For one ounce lots use one tenth of above prices.

Price Per 100 Feet

Size	Single Cotton	Double Cotton	Single Silk	Double Silk	Plain Enamel	Enamel Cotton	Enamel Double Cotton
8	\$3.60	\$4.00	\$3.35	\$4.00	\$3.35	\$4.00	\$4.20
10	2.40	2.40	2.00	2.40	2.00	2.40	2.45
12	1.50	1.60	1.36	1.60	1.36	1.60	1.60
14	1.30	1.25	1.25	1.25	1.25	1.55	1.57
16	.75	.80	.90	1.00	.72	.75	.95
18	.50	.55	.56	.65	.40	.52	.65
20	.36	.40	.50	.52	.32	.40	.52
22	.26	.32	.35	.36	.24	.32	.36
24	.20	.25	.25	.30	.16	.24	.30
26	.12	.14	.16	.20	.11	.14	.16
28	.09	.12	.12	.16	.09	.12	.15
30	.09	.10	.10	.12	.09	.10	.12
32	.09	.10	.10	.11	.09	.10	.11
34	.09	.10	.10	.11	.09	.10	.11
36	.09	.10	.10	.11	.09	.10	.11
38	.09	.10	.10	.11	.09	.10	.11
40					.09	.10	.11

NOTE: Prices per 100 feet are higher than per pound rate to cover cost of measuring and should be used only for small lot sales.

LEAD & RUBBER COVERED WIRE AND CABLE

Size	Single Conductor	Duplex	Three (3) Conductor
No. 14	Price Per Foot .04	Stranded .07	Stranded .08
No. 12	.05	.06	.06
No. 10	.07	.08	.08
No. 8	.09	.10	.10
No. 6	.12	.14	.14
No. 4	.17	.20	.20
No. 3	.20	.22	.22
No. 2	.22	.24	.24
No. 1	.24	.26	.26
No. 1/0	.26	.28	.28
No. 2/0	.28	.30	.30
No. 3/0	.30	.32	.32
No. 4/0	.32	.34	.34
250,000 C. M. Cable	.64		
300,000 C. M. "	.72		
350,000 C. M. "	.80		
400,000 C. M. "	.88		
500,000 C. M. "	1.03		
600,000 C. M. "	1.35		
700,000 C. M. Cable	1.50		
750,000 C. M. "	1.55		
800,000 C. M. "	1.65		
900,000 C. M. "	1.80		
1,000,000 C. M. "	2.00		

NOTE: Above prices are based on following quantities:

No. 16 to No. 8 Less than 100 ft. No. 6 and larger less than 50 ft.

PARKWAY CABLES

Size	Steel Taped	3 Cond.	Non-Metallic	3 Cond.
No. 14 per ft.	.35	.46	.18	.23
No. 12	.38	.50	.20	.26
No. 10	.43	.55	.22	.30
No. 8	.48	.74	.26	.38
No. 6	.70	.95	.37	.57
No. 4	.85	1.30	.50	.72
No. 2	1.06	1.65	.66	.93
No. 1	1.38	2.05	.80	1.25
No. 0	1.50	2.10	.93	1.47

NOTE: Prices on Parkway Cables are based on Trade costs in quantities of less than 100 Feet. Larger quantities take lower prices. Consult your jobber.

WHEELER LIGHTING

>>>>> BUILDS SALES VOLUME

Whatever demand you may receive for Industrial or Outdoor illumination, you will find a unit to meet it efficiently and economically, in the wide range of Wheeler Reflector designs. That fact means that you can absolutely satisfy your customer; you can provide him with the illumination he needs—and you can be sure that it will serve him to his complete satisfaction. It is this wide range of Wheeler lighting units and their proven efficiency that guarantee you a substantial sales volume with the Wheeler Line.

**WHEELER
DURATACH**



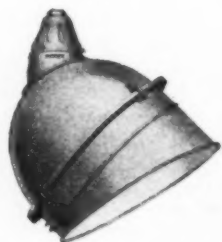
Duratach—a quickly detachable two-piece construction. Combines maximum convenience, economy and lighting efficiency. Recommended for general Industrial illumination.

**WHEELER
GLASSTEEL DIFFUSER**



Provides finely diffused, even and highly powered light. New spring type globe holder firmly supports globe in reflector neck. An ideal unit for fine operations.

**WHEELER OUTSIDE
FLOODLIGHTING UNIT**



Especially recommended for floodlighting miniature golf courses—service stations—and similar locations. Has many exclusive and superior features.

**WHEELER
DUSTIGHT COVER**



Heat resisting glass lens and metal retaining frame protects lamps, sockets and reflecting surfaces. This is but one of the complete line of Wheeler Lighting Accessories.

WHEELER ARCOLUX



A new SIGN REFLECTOR for circular and other small signs. Inconspicuous . . . no extra parts . . . provides intense illumination . . . design prevents any light loss. A popular unit.

WHEELER REFLECTOR COMPANY, 275 Congress St., BOSTON, MASS.
 NEW YORK ATLANTA CLEVELAND
 St. Louis, Indianapolis, Los Angeles, San Francisco, Seattle. Canada: Canadian General Elec. Co., Ltd.

(Continued from page 34)

Ross W. Cryder; James T. Daniels; Thomas Fuller; Mellen C. Greely; Harry B. Kirkland; Dr. Morton G. Lloyd; Alexander Maxwell; J. J. Perry; Frank O. Spain and C. J. Zeigler.

A complete entertainment program has been arranged, including a program for the ladies.

* * *

Find License Violations

The Electrical Association of New York recently had representatives visit 225 contracting establishments with a view to making a comprehensive investigation of infractions of master electricians' licenses. Where violations were found they were referred to the license board for action. Much work has already been done to decrease the number of violations and it is believed that this investigation will result in a higher standard for contractors.

* * *

Illuminating Engineers Give Course

From September 8 to 12 a series of lectures on the fundamentals of architecture will be given by the Illuminating Engineering Society for its members who enroll. The talks will be given at the Art Institute in Chicago by faculty members of the schools of architecture of the University of Illinois and Armour Institute of Technology.

The purpose of this course is to



TAKES OVER BUSINESS: Paul H. Thatcher has bought out the Overmeyer-Thatcher Co. and moved the business to 331 16th Street, operating under the name of Paul H. Thatcher, Inc. The company does a large amount of industrial and commercial work, including railroads, terminals, schools and municipal buildings.



DETECTO-LITE

you certainly need it!

LIST
PRICE
\$1.50

*This Special
Introductory
Offer \$1.00*



LIKE
ALADDIN'S
LAMP ♦ ♦ ♦
♦ ♦ *It tells
all at a
glance*

READS the voltage; indicates polarity at a glance. Good for any current up to 550 volts! Made from Bakelite; it lasts a lifetime.

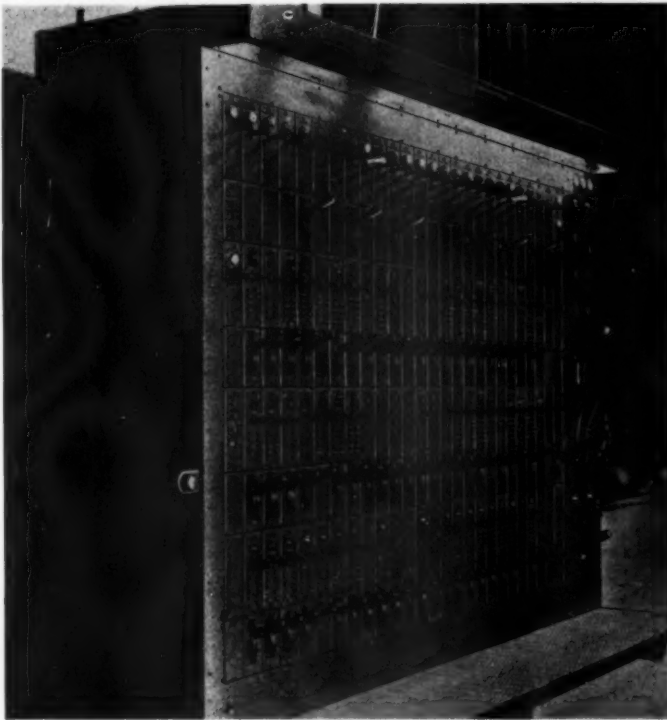
Ask your jobber or send the attached coupon. Packed individually—6 boxes on a beautiful Display Card.

Manufactured by
EAGLE ELECTRIC MFG. CO., Inc.
59 Hall Street
BROOKLYN, N. Y., U. S. A.

You can throw away your old clumsy test bulbs and sockets; you can carry the Eagle Detecto-Lite in your vest pocket like a fountain pen, always ready to serve you. It never gets out of order.

Special Introductory Offer. Tear off attached coupon
EAGLE ELECTRIC MFG. CO., INC.,
59 Hall Street,
Brooklyn, N. Y.
Gentlemen:
I enclose one dollar herewith for which send
me prepaid one Eagle Detecto-Lite.
Name _____ Address _____
City _____

The Largest Portable Stage Switchboard in the World



Built by

WURDACK

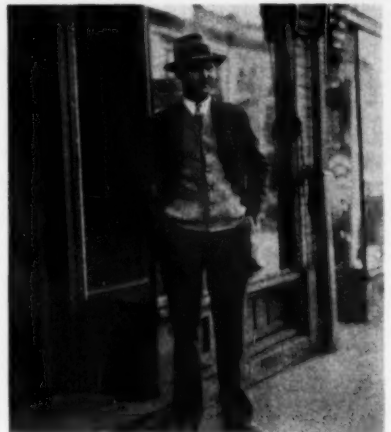
for the New Orleans Auditorium

The switchboard installation in the magnificent New Orleans Auditorium represents an outstanding example of Wurdack engineering and craftsmanship. The huge portable stage switchboard shown above brings to its disappearing stage a flexibility of lighting control and a command of effects second to none in the country. It is equipped with 80 control units and 100 dimmers, and has a current handling capacity of 700 kilowatts. Twenty flexible rubber covered cables, containing a total of 300 wires, connect it to the terminal cabinet. Despite its weight of over three tons, it can be readily moved to any position on the stage. May we send you our folder which fully describes this Wurdack installation?

WM WURDACK
ELECTRIC MFG. CO.

4444 CLAYTON AVE., ST. LOUIS, MO.

See Sweet's catalogue for nearest branch office.



WIRES AMUSEMENT PARK: C. A. Rady, a contractor of Toledo, Ohio, looks thoughtful in this picture. Probably he is trying to remember the number of lights he installed in Willow Beach Amusement Park. It was a large job.

enable the illuminating engineer to know more about the architect's problems and to be able to talk to the architect in his own language, thus bringing about a mutual understanding.

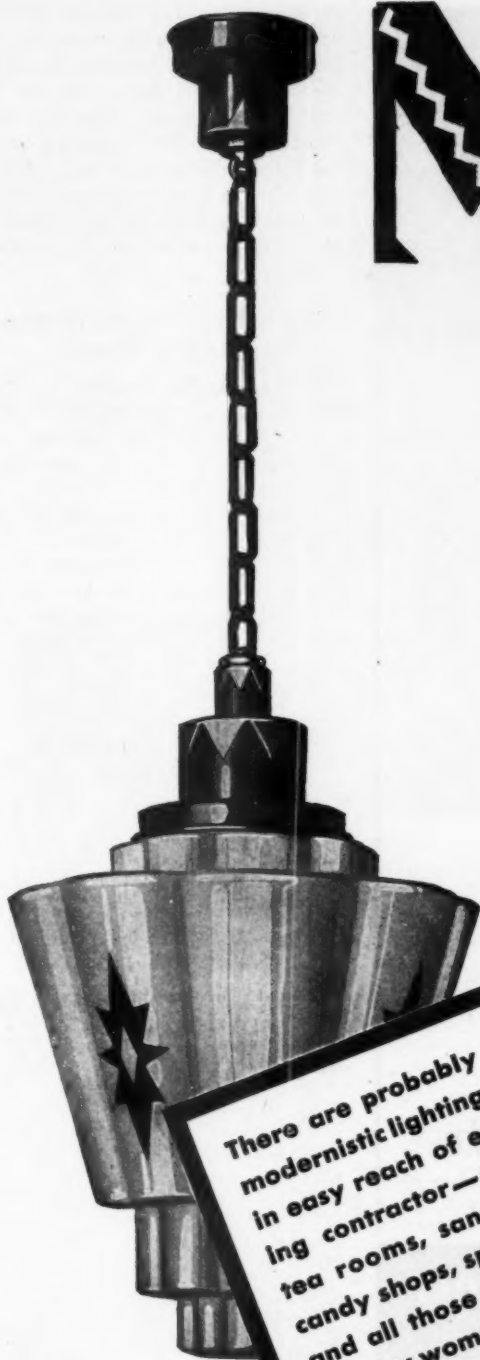
The course will consist of two lectures each day for five days, in the fundamentals of architecture and allied subjects, by professors of architecture of the respective universities. After lunch each day, the groups will be addressed by prominent architects and they will then be taken on inspection trips to interesting buildings. A nominal fee of \$25.00 will be charged for registration. Application for enrollment should be made with J. L. Stair, treasurer, Illuminating Engineering Society Committee on Architectural Courses, in care of Curtis Lighting, Inc., 1119 West Jackson Blvd., Chicago, Ill.

* * *

New Stockton Inspector

G. J. Schwall, who has been connected for some years with the electrical department of the city of Stockton, was named recently by the City Council of Stockton, Calif., as successor to Frank A. Morrell, popular electrical inspector of that city who died recently.

Mr. Schwall started in the electrical business some twenty years ago as an electrician for the Buzzell Electric Works of San Francisco. Later he entered into business for himself as a motor and industrial contractor



WAKEFIELD Modern istic

Authentic modernistic design at a popular price. It comes to you like other Wakefield "Red Spot" material—boxed, complete, ready to hang—ceiling units, chain or semi-rigid stem hangers as you prefer, in sizes from 100 to 500 watts.

The
**F. W. WAKEFIELD
BRASS COMPANY**

Vermilion,
Ohio, U.S.A.

There are probably a dozen modernistic lighting jobs within easy reach of every lighting contractor—restaurants, tea rooms, sandwich shops, candy shops, specialty shops, and all those places patronized by women. They can't be sold standard lighting units because standard equipment is exactly what they don't want. They want something

MODERNISTIC

Write for Modernistic catalog sheet. A number of smart lighting men have sold Modernistic from the picture.

Couch

TELEPHONES

ESTABLISHED 1894



The
Quick
Way to
Talk Things
Over

*On your next Phone job—
call in Couch*

S. H. COUCH COMPANY, Inc.
NORFOLK DOWNS, MASS.

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170 Purchase St.

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CLEVELAND:
14250 Superior Rd.

DENVER:
1715 California St.

NEW YORK:
487 Broadway

PHILADELPHIA:
1725 Sansom St.

DALLAS:
2205 Leonard St.

TAMPA:
5505 Central Ave.

INDIANAPOLIS:
Scott-Jagua Co., Inc.
202 Indiana Terminal
Warehouse

SAN FRANCISCO, LOS ANGELES, PORTLAND, SEATTLE
Sierra Equipment Corp.

MONTREAL:
Franke, Levasseur & Co., Ltd.

TORONTO:
Canadian Telephones & Supplies Co., Ltd.

CHICAGO:
809 W. Jackson Blvd.

ST. LOUIS:
917A Pine St.

ASHEVILLE:
P. O. Box 1892

MINNEAPOLIS:
Harry P. Smith Co.
1017 Lumber Exchange

QUALITY THAT SPEAKS FOR ITSELF

in Stockton. This business he sold out seven years ago to enter the employ of the city of Stockton, in charge of the electrical equipment for the city's fire alarm and other civic electrical systems. Mr. Schwall assumed the responsibility upon the death of Mr. Morrell in a temporary capacity and was appointed by the Council as chief electrician for the city recently.

* * *

Washington League Sponsors Electric Home

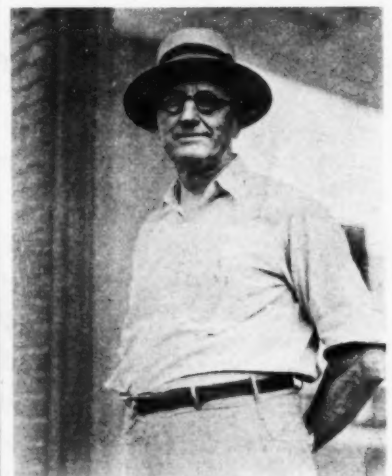
The Electrical League of Washington, D. C., is sponsoring a model electric home in Silver Springs, Md. A tentative date for the opening is set for October 12.

A number of unique features will be worked out. One which is being considered is the elimination of the display of furnishings as much as possible, depending on personal demonstrators to draw attention to the displays.

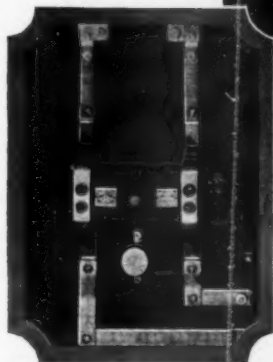
* * *

New Association in Brooklyn

The Brownsville Electrical Contractors Association of Brooklyn, N. Y., was organized July 31, 1930, in the show rooms of the Brooklyn Edison Company. There was an attendance of over fifty at the



INVENTS AIDS TO WIRING—E. S. Damon, Council Bluffs, Iowa, does a good deal of residence and store wiring where pipe must be hung to the joists. As a result he has designed a set of galvanized iron sheathes which slip over the joist, serving the double purpose of holding the pipe in the notch and reinforcing the timber. He has also designed an attachment plug cap.



One of the Type "F"
Remote Control Switches

Lighting by Remote Control is the modern way

When the architects, engineers and electrical contractors lay out the lighting circuits for America's great buildings, remote control is an important consideration and "Diamond H" Switches are invariably included in the plans.

For dependability, neatness of design, high quality of material and workmanship, no other switch can compare with "Diamond H".

This newest of Detroit's many beautiful buildings is 40 stories high and the all important lighting circuits are "Diamond H" controlled.

The beautiful illumination of the general banking floors, the stairways, cafeteria, main and elevator lobbies and other circuits are controlled with many "Type F" switches and "Type G" for emergency lighting.

All stairway and corridor lights are controlled on a master panel in the chief electrician's office.

These switches eliminate carrying main lines to switching points, thus cutting wiring costs.

THE HART MANUFACTURING CO.
HARTFORD, CONN.

Boston

New York

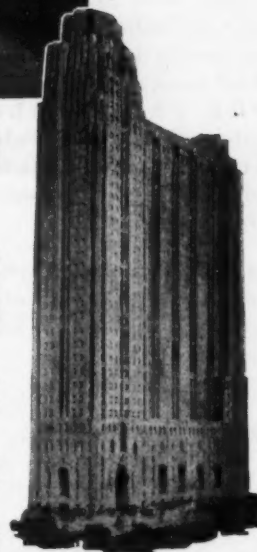
Detroit
Minneapolis

Chicago
Cleveland

San Francisco
Philadelphia

Dallas

Toronto, Can.



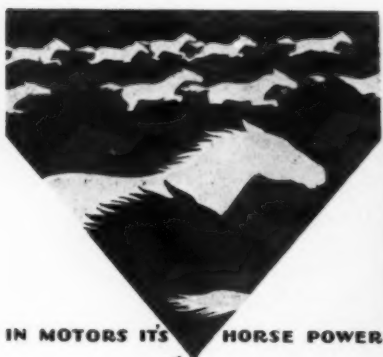
The 40 story Union
Guardian Trust Building,
Detroit, Mich.

(Above) The beautiful
banking floor with un-
usual lighting.

Smith, Hinchman & Grylla
Architects and Engineers
Carr-Weller Company
Electrical Contractors

*Bulletin No. 10 com-
pletely describes them
and gives wiring dia-
grams and many
types of application.*

DIAMOND H SWITCHES



In Mil Flex Blades it's Work Value

The capacity of a motor is measured by horse power. You expect and get 550 foot pounds of work per second per horse power.

Mil Flex and MILFORD Hack Saw Blades are offered on an equally definite standard of measurement—**WORK VALUE**—the number of cuts per blade and the time per cut, made possible by the new Radecki Unifying Process.

This process makes it possible for you to substitute exact **WORK VALUE** for guesswork.

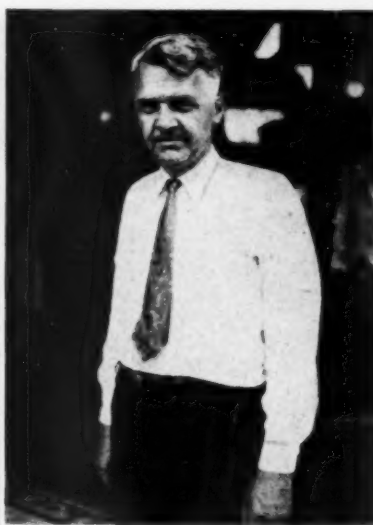
WRITE FOR BOOKLET
AND NAME OF
NEAREST DEALER



Mil Flex
Hack Saw Blades
For Electricians

**The Henry G. Thompson
& Son Co.**

Established 1876
New Haven, Conn. U. S. A.
Also Manufacturers of
Metal and Wood Cutting
Band Saws



**WIRES DUBUQUE BASEBALL
DIAMOND FOR NIGHT PLAYERS:**
—C. H. Keller of Keller Electric Co.,
Dubuque, wired the first baseball
diamond in the country for night base-
ball games.

first meeting. The Kennedy Brothers and I. Prussack of the Prussack Electric Company, Brooklyn, were among the leaders in the organization work.

Louis Freund, President of the New York State Association of Electrical Contractors and Dealers, gave a talk on the value and proper aims of an association and on the need for better business methods among contractors.

* * *

Minneapolis Chapter Elects Officers

F. M. Tripp was recently elected president of the Minneapolis Chapter of Electragists. The other officers elected were George Svendsen, vice president; George Jones, secretary and C. C. Courture, treasurer.

* * *

Frank H. Abbett

Frank H. Abbett of the Harper Abbett Co., Sioux City, Iowa, passed away on August 1 at Green Lake, Minn.

Mr. Abbett was well known in association work in the State of Iowa and was one of the directors of the Iowa State Association. He was a regular attendant at all of the state conventions.

Mr. Abbett was a Spanish war veteran, enlisting from Minneapolis, and a Shriner.



**Now! a
30 Ampere
and
60 Ampere**

**Class A
Weatherproof
Meter Cabinet
without interlock**

**For Outdoor and
Indoor Use.**

**Listed as standard
by
Underwriters'
Laboratories**



WRITE FOR BULLETIN
No. A-54

**The
M. J. Lewis Products
Co.**

505 WEST GIRARD AVENUE
Philadelphia, Pa.

What to Expect of Your **JOBBER'S SALESMAN**

You as a contractor, other things being equal, ordinarily favor the jobber's salesman who renders you the greatest amount of service, directly and indirectly. Such service may embody many things such as:

TO BE YOUR FRIEND in court (his house). Because you are his friend and his customer he should stand up for your rights.

TO BE ALERT at all times in following through on your rush orders, to see that delivery is prompt as possible—even to the extent of delivering minor items in a pinch himself.

TO BE A WALKING ENCYCLOPEDIA of knowledge, not gossip, about the things going on in your territory, which you will like to have called to your attention.

TO BRING YOU FIRST KNOWLEDGE of new products and devices that may be useful to you in your work and which you may have overlooked.

TO BE A FIELD MAN who quickly interprets to his house any changes in your needs brought on by special requirements in your territory.

TO KNOW HIS CATALOG and his line, so as to give you quickly and intelligently descriptions and prices on anything you may need—saving your time.

TO GIVE YOU TIPS on new business, and where his personal help would be of value, go with you to the prospective customer.

A jobber's salesman who qualifies with you along the lines above is a real asset to your business. Value him accordingly, and out of your own experience give him suggestions that will help him further to increase his efficiency as a salesman.

THE JOBBER'S SALESMAN

520 N. Michigan Ave., Chicago

THIS ADVERTISEMENT IS CONTRIBUTED BY THE ELECTRICAL TRADE PUBLISHING CO. IN THE INTEREST OF BETTER RELATIONSHIP BETWEEN CONTRACTORS AND JOBBERS

Sales builders



No. 86
Showcase Reflector for
T-6 1/2 Tubular lamp.



No. 90
Showcase Reflector for
T-10 Tubular lamp.



No. 98
Wall Case Reflector for
standard lamp to 60 watt.



No. 40
Refrigerator Case Reflector
for T-10 Tubular lamp.



No. 1012
Cashier Cage Reflector for
two standard lamps
to 25 watt.



No. 729
Picture Reflector
for T-10 Tubular
lamp.



No. 2900
Interior Electric
Sign.



A real
guide to
more
sales—

Send for
Catalog
8-A

DAY-BRITE
REFLECTOR COMPANY
3825 LACLEDE AVENUE
ST. LOUIS, MO.



HELP BUILD LARGEST FARM WIRING BUSINESS:—The department managers of the Marshall Electric Co., Marshalltown, Ia., probably the largest electrical contracting organization in the United States specializing in farm wiring, are, left to right, front row: Sprague Quinlan, general superintendent; A. J. Clark, secretary-treasurer; Earl N. Peak, president and general manager; W. N. Norris, sales manager; W. H. House, collection department and William Guyon, foreman. Rear row: Phill Hoffman, manager, radio department; Eric Hagstrand, chief engineer; William Wilson, auditor; Miss Nina Lynch, bookkeeper; Miss Otalie Russell, office manager; George Wesley, general foreman; Theo. Kaiser, manager, repair department and Roy Follensby, stores manager.

New Electragists

The following applicants have been accepted into the A. E. I. since the publication of the list in the July issue:

CALIFORNIA

Hermosa:

W. G. McWhinnie

Manhattan Beach:

J. Loyal Huff Electric

Oxnard:

Carl W. Fischer

Redondo Beach:

Griffey Electric Co.
Southwest Electric Co.

FLORIDA

Tampa:

Quinby Electric Co.

IOWA

Dubuque:

Keller Electric Co.
Geo. W. Kennelly Electric Co.

E. P. Smith Electric Contracting Co.

Oskaloosa:

Jamison Electric Co.

Sioux City:

Nystrom Electric Co.

MICHIGAN

Detroit:

Triangle Electric Co., Inc.
MINNESOTA

Duluth:

Anderson & Goss
Bippart-Hunkele, Inc.
McCollom & Thayer
Swanstrom Electric Co.
The Electric Shop
Zenith Electric Shop

Minneapolis:

Calhoun Lighting Studios, Inc.
Ernest R. Delp Electric Co.

Hurd Electric Co.

Lindgren Electric Co.
Marshaleck Electric Co.
Raymond Electric Co.
Semmer Electric Co.
Tripp Electric Co.
Williams Electric Co.

St. Paul:

Central Electric Co.
Consolidated Electric Co.
Economy Light Co.
Electric Supply & Constr. Co.

Eureka Electric Fixture Co.

Hoffman Lighting Co.
Mulligan Electric Co.
North Central Electric Co.

Paul Electric Co.
Riverview Electric Co.
John M. Roberts Electric Co., Inc.

Arthur Swanson
University Electric Co.

NEW YORK

Rochester:

Barber-Donovan, Inc.
Dwyer Electric Co., Inc.
T. H. Green Electric Co., Inc.
Hickson Electric & Radio Corp.

TEXAS

Houston:

Kirk-Semo Electric Co.
J. S. Copeland Electric Co., Inc.
Jacobe Bros. Elec'l Co.
A. T. Vick Co., Inc.



The Kitchen Miles Away!

▲▲▲ Sell Restaurants "BUFFALO BREEZO" Fans

Nothing more unappetizing than greasy cooking odors and a hot blast from the kitchen when the door is opened by hurrying waiters . . . Restaurant patrons, note these annoyances; for they are part of the fresh air minded public. . . . When "Buffalo Breezos" are installed, the kitchen might just as well be miles away—for all this discomfort to guests is banished. . . . Here's a market Mr. Contractor, that is unusually profitable for you as a ventilating expert. Installations are made easily and our engineers gladly will help you in solving your ventilation problems from a correct and scientific standpoint. . . . "Buffalo Breezo" fans are noiseless, efficient and long lived.

More than 200 uses for "Buffalo Breezo" fans. Let us send you descriptive literature for customer distribution.

BUFFALO FORGE COMPANY

504 Broadway, Buffalo, N. Y.

In Canada: Canadian Blower & Forge Co., Ltd.
Kitchener, Ont.

Mail Coupon Today

BUFFALO FORGE CO.
504 Broadway, Buffalo, N. Y.

Gentlemen: Please send me, without obligation on my part, complete information on how to make money on "Buffalo Breezo" ventilating equipment.

Name.....

Address.....

City.....

State.....



BUFFALO BREEZO

THE PUBLIC ALREADY
IS FRESH AIR MINDED

EASE of Installation —Greater Profits

YOUNGSTOWN-BUCKEYE Conduit is the most profitable rigid steel conduit a contractor can install *because* it is the easiest to install.

Its use eliminates lost motion and waste on the job. While it is tough and rigid, it can nevertheless be easily bent to make the most intricate turns; it not only bends easily but it bends without opening at the welds, eliminating waste; its threads are clean and deeply cut, and it can be cut and threaded easily on the job; and last but not least it has a durable, moisture-resisting enamel or electro-galvanized coating that will not chip or crack.

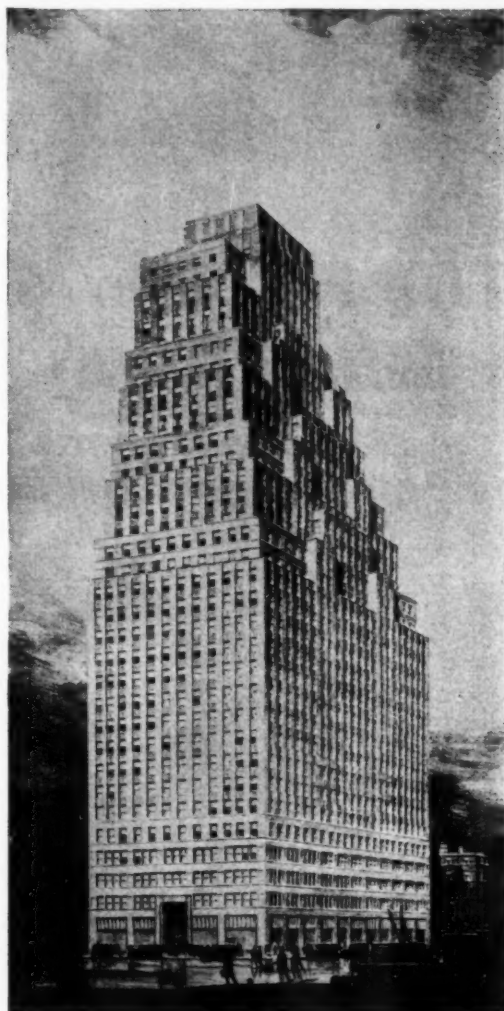
Youngstown-Buckeye Conduit is not only easier to install on the job, but it makes a better job and a more lasting job—affording lifetime protection to the electrical wiring.

Thousands of installations are giving tangible proof of its lasting qualities and thousands of electrical contractors, engineers and electricians will testify as to its ease of installation.

**THE YOUNGSTOWN SHEET
AND TUBE COMPANY**

One of the oldest manufacturers of copper-steel, under the well-known and established trade name "Copperoid"

General Offices—Youngstown, Ohio



Youngstown Buckeye Conduit protects the electrical wiring in this modern office building at 120 Wall Street, New York City.

Architects—**BUCHMAN & KAHN**
Electrical Contractor—**GREER ELECTRIC CONSTRUCTION CO.**
Elevator Contractor—**OTIS ELEVATOR CO.**

DISTRICT SALES OFFICES

ATLANTA—Healey Bldg.	MEMPHIS—P. O. Box 462
BOSTON—80 Federal St.	MINNEAPOLIS—Andrus Bldg.
BUFFALO—	NEW ORLEANS—
Liberty Bank Bldg.	Hibernia Bldg.
CHICAGO—Conway Bldg.	NEW YORK—30 Church St.
CINCINNATI—	PHILADELPHIA—
Union Trust Bldg.	Franklin Trust Bldg.
CLEVELAND—	PITTSBURGH—Oliver Bldg.
Terminal Tower Bldg.	SAN FRANCISCO—
DALLAS—Magnolia Bldg.	55 New Montgomery St.
DENVER—	SEATTLE—Central Bldg.
Continental Oil Bldg.	ST. LOUIS—
DETROIT—Fisher Bldg.	525 Louderman Building
KANSAS CITY, MO.—	YOUNGSTOWN—
Commerce Bldg.	Stambaugh Bldg.
LONDON REPRESENTATIVE—The Youngstown Steel Products Co., Dashwood House, Old Broad St. London, E. C. England	



EXPERTS IN STREET AND BRIDGE LIGHTING:—Bob Dron (left) with Norman E. Dunscomb, of the R. Dron Electrical Co., Madison, Ill. This company's street lighting jobs are too numerous to mention and they have made the installations on the bridges across the Mississippi at Cairo, Alton and Chain of Rocks; the Missouri at Bellefontaine, and the navigation lights on the Ohio River bridge at Paducah, Ky. The company's success is attributed to unusually complete cost data, improved lighting designs and rapid service in finishing the various jobs.

National Lighting Campaign Is Two-fold

Two new and comprehensive local lighting programs designed to increase factory and store lighting sales respectively have been announced to the industry by the Society for Electrical Development. These programs have been developed to prepare a form of local campaign that will assist local lighting groups to capitalize on their sales opportunities.

Since lighting sales differ according to local conditions, two distinct campaigns have been provided enabling the local group to select the one best suited to its needs at the time. In some localities factory lighting business is of paramount interest while in many others the opportunity lies in modernizing store lighting. The new material immediately available in this drive for the sale of adequate lighting, consists of eight colorfully illustrated four-page letters and three booklets. Four of the letters and two of the booklets combine to make up educational literature for the factory campaign while an equal number of letters and one of the booklets comprise the promotional material addressed to store executives.

Complete descriptions of all material are contained in two prospectuses covering both phases of this



No. 110 non-adjustable water-tight floor box.



No. 120 Adjustable Water-tight Floor Box without receptacle.



No. 130 adjustable water-tight floor box.



No. 160 floor box. 20 amp., 2 wire.



No. 175 floor box. 30 amp., 2 wire.



No. 180 floor box. 30 amp., 3 wire.

LET US KNOW

When you need Floor Outlet Boxes. We will be glad to quote on your requirements.

USE THE COUPON BELOW

"LATROBE" FLOOR BOXES

are designed to save labor and to meet your requirements. Installation in the finest buildings throughout the country is real proof of superiority.

Carried in stock by over 300 Distributors.

Fullman Manufacturing Co.
Latrobe, Pa.

Mail this Coupon Today

FULLMAN MANUFACTURING CO., Latrobe, Pa.

We are in the market for Floor Boxes. Send us your catalog and a FREE copy of the 1930 Nat'l Elec. Code.

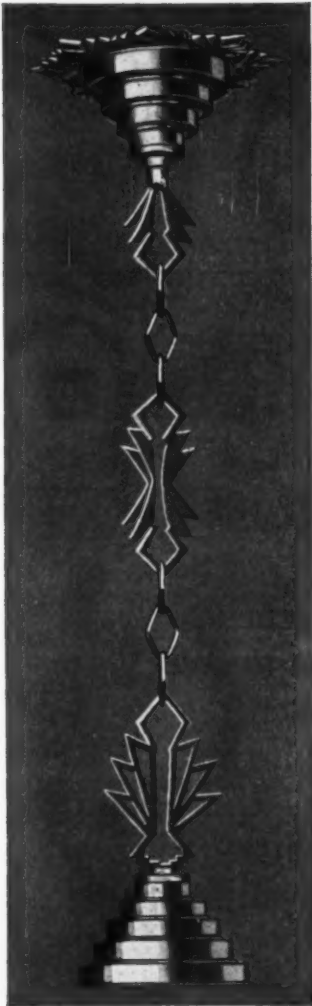
Name.....

Address.....

City.....State.....

Our Jobber is.....

MODERNISTIC AND EFFICIENT



ARISTOCRAT and SOVEREIGN LINES

built by

"Hanger Specialists"

The consumer demand for the modernistic style, in vogue today, is being supplied with AMCO hanger.

Contractors alert to the times are cashing in on the "Aristocrat" and "Sovereign" lines.

*Order from your Jobber NOW
or write us direct giving his name.*

THE ART METAL CO.
1800 E. 38th Street
CLEVELAND - - - OHIO

coordinated campaign which, it is pointed out, is based on the same resultful method of combined effort that most industries have considered necessary to secure attention from the public for the facts about the advantages of what it sells.

A third publication, the sales promotion manual, sets down the procedure for initiating and carrying on each campaign. The technique of selecting prospects, assigning inquiries, keying promotion with solicitation, etc., are outlined in this manual.

Each program recognizes the two essential stages in a lighting transaction: One, the educational or pre-selling stage, in which the prospect is made familiar with the benefits of good lighting, and second, the actual process of selling the installation to the buyer. Both programs contemplate that the pre-selling or educational stage is accomplished most advantageously through the combined activity of the local lighting industry—contractors, wholesalers and power company—and lamp and equipment manufacturers, if the latter are in the territory. Definite provision is made for a close tie-in with solicitation by the individual participating companies to follow through promptly any interest evidenced by a prospect.

In addition to these new materials, there is included as part of the program, the two series of two-color, four-page Franklin letters produced by the Society last year, and which have met with exceptional success, more than one-half million pieces having been used already by leagues and power companies.



COMPLETES LARGE REMOTE CONTROL JOB: I. B. Jackson who has just completed a remote control electric installation for the France Lime and Stone crusher plant at Logansport, Ind. This is one of the largest jobs ever let in the vicinity of Logansport.

Out with the old



WHY tolerate inefficient, out-of-date and expensive service? Why continue with odd or objectionable voltages, when the modern way of using **SORGEL Air-Cooled Transformers** will give you the best suited voltages?

Transform the A.C. power circuits to voltages that will be more efficient for your lighting, portable tools, and other apparatus. It will save you money.

Standard $\frac{1}{4}$ to 50 KVA.
Other sizes built to order

Single phase, 2-phase and 3-phase
110, 220, 440, 550 Volt

Approved by Underwriters

Being air-cooled, **SORGEL Transformers** can be installed easily and economically inside of buildings, or right where the change of voltage is wanted. No enclosures needed; no fireproof vaults; no oil; no upkeep.

SORGEL AIR-COOLED TRANSFORMERS

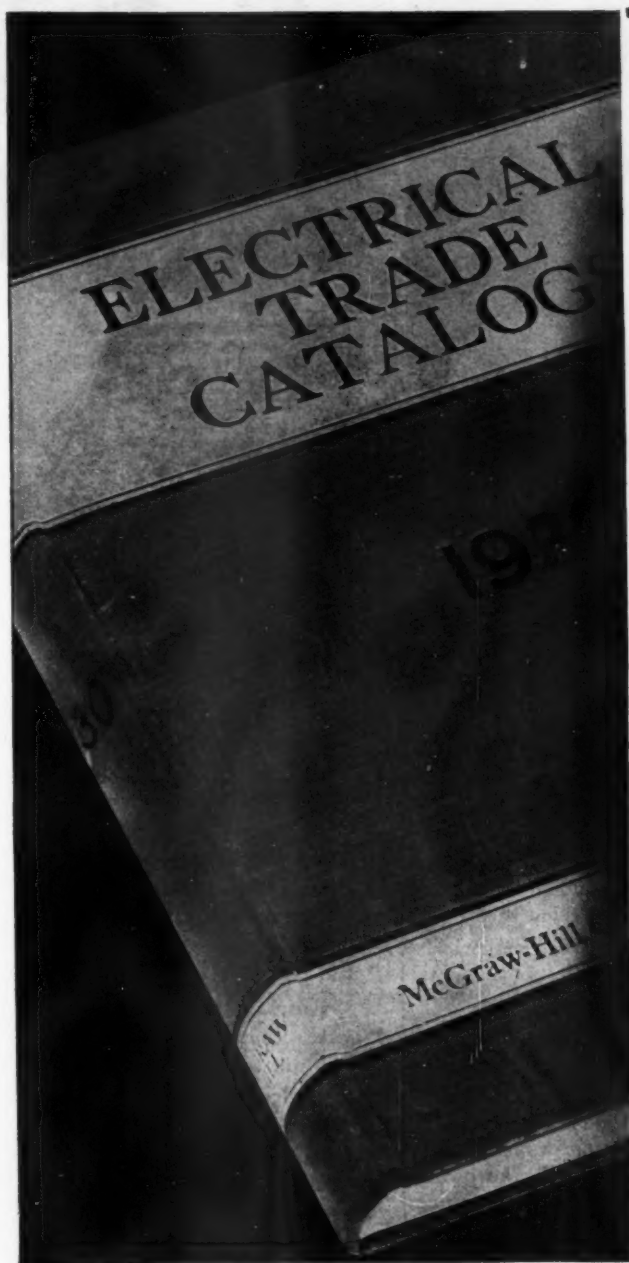
WITH CONDUIT CONNECTIONS

Also Complete Line of Air-Cooled

Booster Auto Transformers
for A. C. Network Systems
Sizes 1 to 500 KVA.

Transformers Designed for Special Applications

Sorgel Electric Co.
Clybourn and W. Water Sts.
Milwaukee, Wis.



Use This Collection of Catalogs
Day In and Day Out—

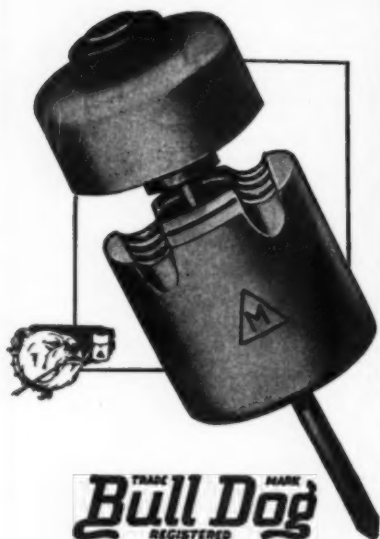
To Help You Design—
Estimate—Get Orders—
Place Orders

Here are the Manufacturers of Electrical Supplies, Equipment, Appliances and Raw Materials who have co-operated to make the 1930 Edition of Electrical Trade Catalogs the finest collection of catalog data that it has so far been our privilege to distribute to the electrical trade—

Ackerman-Johnson Co.
Frank Adam Electric Co.
Ambler Asbestos Shingle & Sheathing Co.
American Blower Corp.
American Lava Corp.
American Steel & Wire Co.
Anaconda Wire & Cable Co.
Ansonia Electrical Co.
Autovent Fan & Blower Co.
Baldor Electric Co.
Wallace Barnes Co.
Bead Chain Mfg. Co.
Benjamin Electric Mfg. Co.
Black & Decker Mfg. Co.
Boston Woven Hose & Rubber Co.
Bryant Electric Co.
Buffalo Forge Co.
Central Tube Co.
Circle F Mfg. Co.
Continental-Diamond Fibre Co.
R. W. Cramer & Co.
Detroit Insulated Wire Co.
Diehl Mfg. Co.
Doehler Die Casting Co.
Domestic Electric Co.
Driver-Harris Co.
Dumore Co.
Struthers Dunn, Inc.
Empire Steel Corp.
Engineering Products Corp.
Follansbee Bros. Co.
Formica Insulation Co.
Frets-Moon Tube Co.
Fullman Mfg. Co.
General Electric Co.
General Plastics, Inc.
Wm. D. Gibson Co.
Gilby Wire Co.
Graybar Electric Co.
Handy & Harman
H. M. Harper Co.
Hervig Co.
Harvey Hubbell, Inc.
Hunter Pressed Steel Co.
Ideal Commutator Dresser Co.
I-T-E Circuit Breaker Co.
Indiana Rubber & Insulated Wire Co.
Janette Mfg. Co.
Johnson Fan & Blower Co.
Kent Co.
Klemm Reflector Co.
Kilgill Bros.
Leland Electric Co.
Macallen Co.
Massachusetts Machine Shop
Master Electric Co.
Mica Insulator Co.
Misener Mfg. Co.
Monowatt Electric Corp.
National Carbon Co.
National Slate Association
National Vulcanized Fibre Co.
Newcomb Spring Corp.
Newton Die Casting Corp.
New York Insulated Wire Co.
Peck Spring Co.
Pittsburgh Reflector Co.
Precision Castings Co.
Progressive Mfg. Co.
Reflector & Illuminating Co.
Reliance Automatic Lighting Co.
Republic Steel Corp.
Reynolds Electric Co.
John A. Roebbing's Sons Co.
Rome Wire Co.
Seavill Mfg. Co.
Shakeproof Lock Washer Co.
Standard Electric Time Co.
B. F. Sturtevant Co.
Taplet Mfg. Co.
Transformer Corp. of America
United States Rubber Co.
Viking Tool & Machine Co.
Wadsworth Electric Mfg. Co.
F. Wall Mfg. Supply Co.
Walser Automatic Timer Co.
Warren Telechron Co.
Waterbury Button & Molding Co.
Westinghouse Electric & Mfg. Co.

Whenever you need catalog information on the products of any of these companies—turn to their catalog in Electrical Trade Catalogs!

"It has a grip like its namesake"



Split Knobs

THESE are the safe, approved knobs for all types of residence wiring. They mean better jobs at no added cost. Bull Dog Split Knobs, together with Illinois Porcelain Tubes, Cleats and Solid Knobs form a complete line of standard porcelain.



Sold Through Wholesalers

Illinois Electric Porcelain Co.
Macomb, Illinois



GROWING FAST IN NEW LOCATION:—J. A. Munhoff, Reliable Electric Co., Iowa City, Iowa, has had the pleasure of outgrowing his first quarters and finds business much better in his new store and shop at 13 S. Dubuque street.

Chicago Association Issues Standard Specifications

The Electric Association, Chicago, Ill., has compiled, in loose-leaf form, standard electrical specifications for office buildings. A committee of the association has worked for more than a year in developing this material.

These specifications have been submitted to the Joint Committee on materials and methods of the Chicago Chapter, A. I. A., and to the Illinois Society of Architects and accord has been reached on the general principles.

The purpose of this book is that it be used as a reference presenting in concrete form the electrical requirements of the modern office building, including store, show-windows and other spaces incidental thereto. It endeavors to provide proper service to the tenant and enable the owner to effect economies in construction and maintenance. A special attempt has been made to obviate the extra expense of providing additional wiring after the building is completed.

The specifications in the book, consisting of 111 pages, are all paragraphed and numbered so that they may be referred to by the numbers and the actual copying handled by stenographic help.

The right-hand pages of the book consist of specifications for a typical office building served underground and employing a main distribution switchboard. As certain types of office buildings are served overhead



\$25.00 for
this Kit

Every One— a Quick Sale

WHEREVER there are motors there is need of brushes. You can supply this need quickly, easily, with satisfaction to your customers and profit to yourself with Ohio Kit, No. 35.

This kit, compact but complete, contains 122 brushes, and will serve over 300 types of single-phase motors.

Wherever there are coffee grinders, meat choppers, shoe repair machines, or other electrically operated equipment using single-phase motors, you are prepared to give prompt, efficient service.

Refills are always available.

THE OHIO CARBON CO.

12508 Berea Road, Cleveland, Ohio

West of the Rockies

351 Ninth Street, San Francisco, Calif.

From Raw Material
to finished product





Just Common Sense

The growing use of THE NATIONAL ELECTRICAL RESALE PRICE SERVICE by alert and profit minded Contractors in every community refutes the loose talk so often heard that—Electrical Contractors are a "total loss."

PAYS PROFITS

If you are interested in more profitable business rather than just more business we will gladly send you our latest booklet "Your Silent Partner"—It's yours for the asking, but since this Service is only supplied to those actively engaged in the electrical business, please attach your letterhead to the coupon below.

HENDERSON-HAZEL CORPORATION,
5005 Euclid Ave.,
Cleveland, Ohio.

Gentlemen:

Without obligating myself in any way, I would like to read your new booklet, "Your Silent Partner." Please send me a copy.

Name.....

Street Address.....

City or Town.....

State..... EC9-30



Threadless **ADAPTERS**

Type CC-NT
Type LL & LR No. 8080-NT
Type E No. 8010-NT
Type X No. 8040-NT
Type FSC No. 8590-NT
Type CA-NT

WRITE FOR PAGES 2-A & 3-A, CATALOG 187-A

The ADAPT[®] Co.
2996 East 72nd St., CLEVELAND, OHIO

NEW YORK: A. Stone, 112 E. 23rd St. BOSTON, MASS.: E. R. Bryant, 52 "B" St.
CHICAGO, ILL.: United Electric Sales Co., 300 West Adams Street
PHILADELPHIA, PA.: Craven Electric Sales Co., 30 Bank Street

An Indispensable Instrument—Inexpensive—But A Forceful
Reminder of Your Generosity

YOU CAN HAVE EVERY

Test-O-Lite

**In Your Customers' Pockets
Carry YOUR Name**



Lists at
\$1.50
each
Write for Discounts

**A Practical Gift For
An Electrician**
—Welcome At Anytime
—Or As A Christmas
Remembrance

TEST-O-LITE is the first practical pocket-tester for testing high resistance leaks. Its tiny Neon lamp instantly detects trouble in electrical circuits, locates burnt-out fuses, light and motor troubles, faults in electrical appliances, auto spark-plugs and radio sets.

TEST-O-LITE has the remarkable characteristic of becoming illuminated at 110 volts through resistance of 20,000,000 ohms (20 megohms) and frequently as high as 50,000,000 ohms (50 megohms).

L. S. BRACH MFG. CORP.
Specialists In Electrical Protective Devices for 24 Years
Newark, N. J., U. S. A. • • • Toronto, Canada

and do not require what is ordinarily considered a main distribution switchboard, and likewise there are several satisfactory methods of distribution and construction throughout the building, alternates to the typical specifications are provided on the left-hand pages.

The book not only gives complete specifications but includes a number of photographs, diagrams and phantom drawings of switchboards, services, wiring installations, etc. It also includes a number of conduit and wire tables and a table of standard wiring symbols.

In general distribution of the book a charge of \$5.00 is being made.

* * *

Municipal Electricians Elect Officers

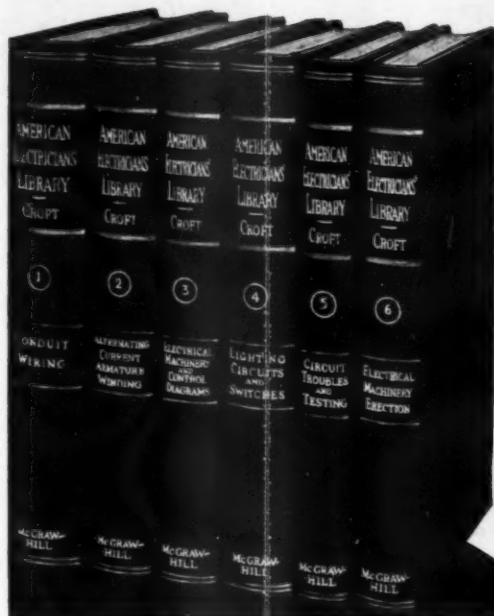
Charles J. Reading, electrician in charge of the Salt Lake City fire and police alarm system, was elected president of the International Association of Municipal Electricians, at their annual convention which closed in Denver August 22.

Mr. Reading has been city electrician of Salt Lake City for the past 17 years. Prior to that time he was an electrician in the employ successively of the Utah Power & Light Company and the Mountain States Telephone and Telegraph Company. He was chairman in charge of the arrangements for the 1927 interna-



POWER AND LIGHTING SPECIALIST VERY BUSY:—Bert Le Bron (left) and his superintendent, Harry Delaney, of the Le Bron Electric Works, Omaha, Neb., at the door of the power house at the Omaha Airport, where the company has installed the wiring, totaling around \$30,000. When this picture was taken, Le Bron had 34 men working.

To electrical workers who want to succeed ... an invitation to examine this big Library—



What the six big volumes of this Library offer you!

Terrell Croft prepared this subscription library for practical electricians. The six volumes bring to you exact step-by-step directions for the installation of every type of conduit wiring job—they tell you how to handle every kind of lighting circuit and switch problem—they give you short cuts to saving time on maintenance routine—they give you useful tips on electrical machinery erection—they offer you practical, clear explanations of all kinds of A.C. armature winding jobs—they bring you a thousand armature winding, electrical machinery, and control diagrams—they show you the surest, quickest methods of locating and remedying circuit troubles. They cover the countless problems you are confronted with daily.

More than 1,000 wiring diagrams—

The thousand wiring diagrams in these six books are alone worth the price of the entire library to any practical electrician. Many of these diagrams are unobtainable elsewhere; many more are very hard to get from any other source; all of them are much clearer and more helpful than most wiring plans available. They include:

- 300 lighting circuit diagrams, and a number of other practical working drawings
- 300 conduit-wiring diagrams
- 9 single-phase armature winding diagrams
- 52 two-phase armature winding diagrams
- 100 three-phase armature winding diagrams
- 570 electrical machinery and control wiring diagrams

This Library contains all the useful hows and whys and wherefores for wiremen, trouble shooters, armature winders, electrical maintenance men, and electrical contractors. It gives you the practical information that has earned for these books the friendship of countless successful electrical workers. With these six books you'll step ahead faster and you'll go further than the man who relies on his own limited experience.

THOUSANDS and thousands of men in every part of the country have used the six big books of this Library to make their work easier and to push themselves ahead. If you, too, are determined to go further in electrical work, no matter what your position is now, you are invited to examine the American Electricians' Library for 10 days without any obligation to purchase it. Furthermore, if after you have examined these books you decide that they can help you as they have helped countless others, you can have Braymer and Roe's *Rewinding Small Motors* absolutely free.

Terrell Croft's American Electricians' Library

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Let us send you these fact-packed books for ten days' free examination. There is no charge for the examination—no obligation to buy the books unless you want them. These books have helped, and are helping, so many men that it is no longer a question of "Will they help you?"—the question is "Will you let them help you?" We could fill several pages with arguments telling how so many thousands of men have profited by the American Electricians' Library. But, our arguments won't increase your salary—so we'd like to leave it to the books—and we'll stand or fall on the outcome of your examination. You will agree that this is a liberal offer; and, frankly, we couldn't afford it if this examination offer didn't usually convince. We know how good these books are—we want you to see them for yourself.

FREE! if you act now

Braymer and Roe's **REWINDING SMALL MOTORS** comes to you absolutely free if you act now in getting your **AMERICAN ELECTRICIANS' LIBRARY**. This book will give you much practical information about rewinding all types and designs of fractional horse-power motors.

A Valuable Book Absolutely Free

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Gentlemen: Send me for 10 days' free examination, all charges prepaid, the **AMERICAN ELECTRICIANS' LIBRARY**, 6 volumes. If I find the books satisfactory, I will send you \$1.50 in ten days, and \$2.00 a month until the Special Price of \$17.50 has been paid. If they are not what I want I will return them. Upon receipt of my first payment you agree to send me a free copy of *Braymer & Roe's Rewinding Small Motors*.

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RALCO RUGGED RECEPTACLES

Type A Type P Type D

Each year more operating officials are being convinced by experience that it pays to install RALCO Receptacles with the protective ground connection on the Receptacle and Plug.

All new installation should be so installed.

The Receptacles and Plugs illustrated are constructed to meet the Underwriters' rule 908—1928 Code for small Portable Equipment, such as: Extension Cords, Portable Saws, Drills, Reamers and the like, in Industrial Works.

It takes only a few minutes of your time explaining why to your customer.




Type C Ask for Bulletin No. 105. Type HR

Ralco Manufacturing Company
DESIGNERS AND MANUFACTURERS
125 N. Albany Ave., Chicago, Ill., U. S. A.



KEEPS ALL EQUIPMENT ABOVE PAR:—Martin W. Flynn, Council Bluffs, Iowa, believes in plenty of room, well-arranged stock and up-to-date equipment. He is shown here with a new truck, just purchased and newly decorated with the company name.

tional convention which was held in Salt Lake City.

Other officers elected by the association were L. R. Haight, Binghamton, N. Y., secretary; H. H. Berry, Springfield, Mass., chairman of the executive committee, and W. F. Qualls, South Bend, Ind., treasurer. Jacksonville, Fla., was chosen for the 1931 convention city.

* * *

Decorate with Light Booklet Published

A colorful plan book has been made available through the Society for Electrical Development, by the Decorate with Light Committee in its attempt to foster year around attention on decorative lighting suitable for all types of holiday and social events.

Presenting an electrical calendar, which spots and suggests periods when there is apt to be high public and individual interest in decorative lighting, the plan book also provides a wealth of historical background with respect to such occasions as Christmas, New Year's Day, Lincoln's Birthday, St. Valentine's Day, Washington's Birthday, St. Patrick's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Halloween and Thanksgiving. In addition holidays with special local appeal are listed together with brief annotations as to their significance.

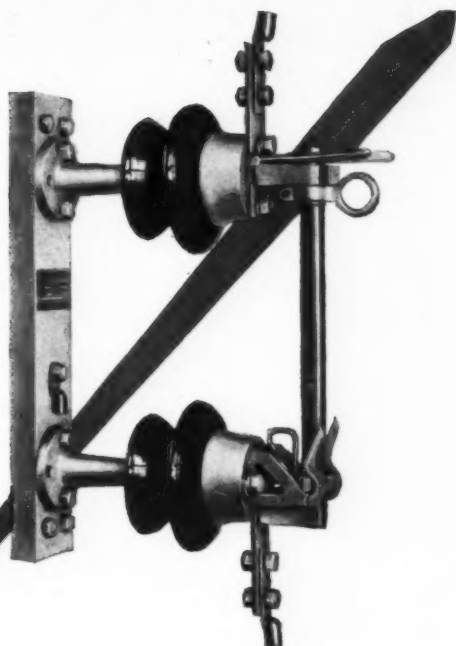
A special section dealing only with outdoor decorative lighting during the Christmas season provides a complete operating manual on the ways and means of arousing local public

"LORICATED" CONDUIT

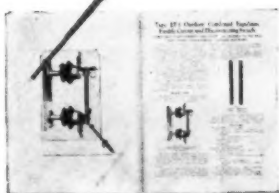
completely protects the
wiring system in Greater
New York's largest
hotel, the St. George.



Garland Manufacturing Co., Pittsburgh, Pa.



USED by the thousands



For detailed information, refer
to Catalog GEA-1143



JOIN US IN THE GENERAL
ELECTRIC PROGRAM, BROAD-
CAST EVERY SATURDAY EVE-
NING ON A NATION-WIDE
N.B.C. NETWORK

WHEN the Type EF-1 expulsion fusible cutout was first offered, it was received with an enthusiasm that has not yet abated. It is used to-day by the thousands.

With the EF-1 cutout, performance is positive on high as well as low currents, and operation is rapid because of spring expulsion. The fuse is of the dry type, light in weight, and sufficiently strong to withstand excessive shock and vibration. The holder is

of specially treated, high-dielectric fiber.

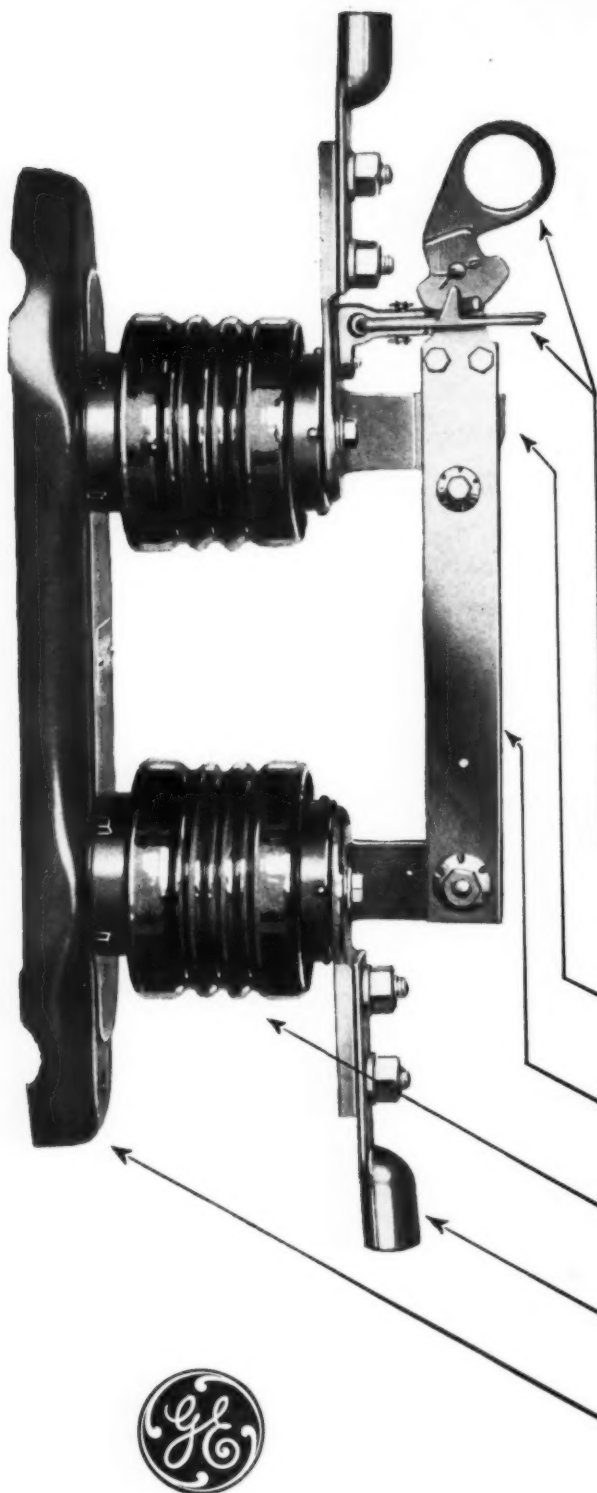
After operating, the fuse is removed by an improved fuse hook with the greatest ease and without hazard to the operator. It is then discarded and replaced by an all-new, factory-assembled unit.

In addition, Type EF-1 expulsion fusible cutouts are low in first cost and entail extremely little maintenance expense.

500-47

GENERAL ELECTRIC

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES



Qualified for EXACTING SERVICE

Type LG-118B

Indoor Disconnecting Switch

These switches are available in ratings of 15,000 and 23,000 volts, 200 to 1200 amperes, single- or double-throw, front- or back-connected, with or without blade latch.

Outstanding features which qualify them for exacting service are:

Large off-set opening eye permits easy insertion of hook and operation from directly beneath as well as from all usual positions. Blade latch locks blade positively. One of two cams functions with opening eye to release latch; the other is seal-break, overcoming any sealing-in tendency.

Tongue-type contact and hinge blocks are one-piece copper castings. They are self-adjusting, have high conductivity, and exert consistently high contact pressure.

Double laminated blade is of hard-drawn switch copper, is large and strong to maintain alignment, has high conductivity, and makes tongue-type contact.

Moderate-duty insulators, of the best porcelain known, are interchangeable, are strong physically, and have exceptional dielectric strength.

Pressed terminals of hard-drawn copper tubing, used on all switches 800 amperes and below, are of the multi-bolt type to prevent loosening.

Base of either punched steel or cast metal is designed for pipe and flat-surface mounting.



500-52

JOIN US IN THE GENERAL ELECTRIC PROGRAM, BROADCAST EVERY SATURDAY EVENING ON A NATION-WIDE N.B.C. NETWORK

GENERAL ELECTRIC

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES

interest in this event. Copies of the complete lighting brochure are available in quantities at a nominal consideration by writing to the Society at 420 Lexington Avenue, New York City.

* * *

Lighting Studied at Camp Cooperation X

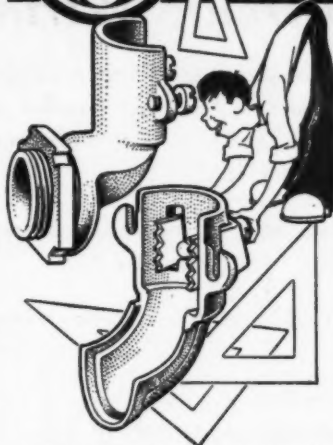
Aside from continuing discussions and reviews of problems incident to the Red Seal plan for adequate wiring and the Franklin lighting plan, considerable space was given on the program of Camp Cooperation X to the possibilities and problems of commercial and industrial lighting. Thus there was presented a blending of the old and the new in League administration by speakers especially chosen because of their experience and leadership in handling and directing league and association work.



G. W. Weston, Newly Elected
Chairman, League Council

Among the speakers were: Louis Kalischer, "Electrical Modernization as Sponsored by the Electrical Association of New York"; J. H. Blitzler, Lightolier Company, "How Can We Cooperate to Sell Home Lighting?"; H. W. Horton, West Penn Power Company, Pittsburgh, "Selling the Idea of Adequate Commercial Wiring by Organized Methods"; G. S. Merrill, National Lamp Works, Cleveland, "Proper Operating Voltage for Incandescent Lamps"; R. W. Staud, Benjamin Electric Manufacturing Company, "The Franklin

ANGLE TITE-BITE Box Connectors



It is easy to go around the corner with your conductors and have them protected in the smooth wireway of the new T&B "Tite-Bite" Angle Connectors.

T&B "Tite-Bite" Angle Connectors are a new addition to the T&B "Tite-Bite" line of connectors and are made in two parts: the connector body and a cap. With the cap removed you have a real get-at-able elbow outlet—no fishing of wires.

The cap holds the grip—a screw in the cap forces the grip to take a "Tite-Bite" on the armor of the cable that won't let go. The teeth on the grip cannot spread or enter the armor and the screw does not touch it. The cap slides on to the body and is held in place by two screws which do not come out.

T&B "Tite-Bite" Angle Connectors hold a wide range of cable sizes and are just the thing for making a finished job in cramped quarters or those household appliances that hug the wall.

T&B "Tite-Bite" Angle Connectors are made of tough malleable iron and steel and protected from corrosion with Tabolite.

Pat. Pending

Approved

THE THOMAS & BETTS CO.

Main Office: 15 Park Place

Factory: Elizabeth, N. J.

SURGES AIR-COOLED TRANSFORMERS



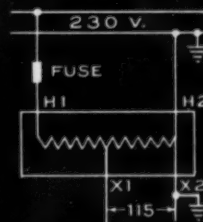
1/2
to
50
K.V.A.

Single,
Two,
or
Three
Phase

CONSULT US ON YOUR
SPECIAL AND STANDARD
TRANSFORMER NEEDS.

Write for Bulletin 112.

SURGES ELECTRIC CO., Milwaukee, Wis.



New Code Transformer
for Polarity Wiring
(Type SA, single phase)

SURGES transformers are specially designed for factory installations—for the economical operation of low voltage incandescent lamps, portable tools, fans, welders, etc., from power mains. They are easy to install and meet the requirements of the National Board of Fire Underwriters.



Conduo-Base for Branch Circuit Wiring

Provides an ideal raceway for electric branch wiring. It enables one to have any number of telephones, desk lights, and any other outlet connections "just where wanted."

Sell the Conduo-Base Idea to your prospects and increase your electric wiring business.

Conduo-Base is sold through electric wiring contractors.

Licensed Manufacturers

DAHLSTROM METALLIC DOOR CO.
Jamestown, N. Y.

UNITED METAL PRODUCTS CO.
Canton, Ohio

KNAPP BROS. MFG. CO.
Chicago, Ill.



ONE OF OLDEST FIRMS IN THE SOUTH:—E. W. Gray (left), C. H. Loop and J. F. Gray handle the affairs of Gray Bros., Memphis, Tenn., electricians. This company specializes in large work and also concentrates on fixtures and commercial lighting installations.

Lighting Plan and New Material Available to Promote It"; Earl Whitehorse, McGraw-Hill Publishing Company, "A Point of View on the New Home."

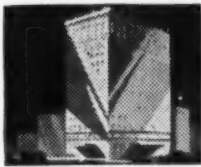
The new lighting program now being offered through the Society by lamp and equipment manufacturers, was followed by the conferees with student-like attention. This discussion centered around the presentation of new material available to promote not only the Franklin Lighting Plan but all plans for the sale of commercial and industrial lighting installations. The schooling of the conferees in the several phases of the new selling material was headed by R. W. Staud, member of the Commercial and Industrial Lighting Committee of the Society for Electrical Development.

In addition to Messrs. G. W. Weston (District 8), and J. J. Caddigan (District 1), chairman and vice-chairman respectively of the League Council, the following men were elected as members of the League Council for the various districts: District No. 1, H. E. Dawson; District No. 2, D. C. Bridsell, J. H. Van Aernam and Earl Whitehorse; District No. 3, J. E. North, L. E. Coen; District No. 4, H. A. Brooks; District No. 5, B. H. Martin, J. J. Brennan; District No. 6, R. S. Steffens, W. O. Zervas and Roy Thurman; District No. 7, J. S. Hogan; District No. 8, C. F. Farley; District No. 10, J. J. Cooper; District No. 11, R. E. Folland; District No. 12, H. H. Courtright; District No. 13 (Canada) E. W. Ashworth, J. G. Glassco and James Lightbody.

Representatives from forty-one leagues and thirteen subsidiary leagues were present. The League Council selected Chicago as the meeting place for the fourth and winter conference.

In St. Louis Hotel Mayfair....

8th and St. Charles

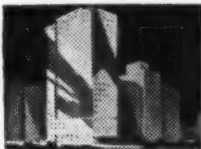


In the center of theatre and shopping districts. Floor lamps, fans, circulating ice water in every room. The quiet, refined atmosphere of an exclusive club—an hotel of distinction. Dining room. Coffee shop. Garage service.

400 ROOMS
BATHS — \$3⁰⁰ to \$6⁰⁰

Hotel Lennox....

9th and Washington



St. Louis' newest and smartest hotel opened September 3rd. In the heart of business district. Dining room. Coffee shop. Garage service.

400 Rooms with tub
bath and shower — \$3⁰⁰ to \$6⁰⁰

Hotel Kings-Way...

West Pine at Kingshighway



Opposite beautiful Forest Park. Near bus, street car and motor highways. 20 minutes from downtown. Club breakfasts, table d'hôte dinners. Rooms for two from \$4. Special rates for permanent guests.



Heiss Hotel System KMOX



A ROLL O' TAPE

*Electrical flash-
es gathered
among the Big
Wire-and-Pipe
Men by*

Coit A. (Duke) Smith

IN line with the craze for endurance contests of all kinds which is sweeping the country, E. M. Nystrom, Sioux City, Iowa, comes to bat with the suggestion that the contractors hold a showdown with a big prize for the man who goes the longest without taking a profitless job. (We second the suggestion.—Ed.)

FISCHBACK & MOORE, of New York, celebrate each year with a beefsteak party for all employees. Butcher's aprons are supplied to guests. This not only lends atmosphere to the party, but the high bibs allow one and all to eat heartily—yes, even recklessly, with no fear of getting gravy on the vest. Employees are urged to bring wives or sweethearts (but not both) to the party.

EVERY year the San Joaquin County Fair-grounds are being improved. Ringing in on these improvements, the Grider Electric Co., Stockton, Calif., completely revamped a number of concrete posts turned over to the fair authorities by the state. The posts were equipped with new bases and tops making an excellent lighting job around the grounds. The company also got a number of special floodlighting jobs in the fair.

THE well-known paperhanger with one arm and the seven year itch has nothing on R. C. Smith, Chadron, Nebraska, contractor. He specializes in schools and goes even 75 to 100 miles for these jobs and others.

REPAIR work properly done is always a fine source of revenue for the electrical contractor. R. C. King of Fairbury, Neb., has a routine for handling the articles to be fixed, which has reduced the worries of himself and the customers, consequently bringing him much extra business. He has a section of roomy bins, marked Monday, Tuesday, etc., in which the appliances are placed when examined and tagged for repair. Thus the workman knows just



KNOX

ANTENNA ACCESSORIES

Install Them NOW!

MAKE sure you have a stock of KNOX Antenna Insulators and KNOX Lightning Arrestors on hand, now that the radio season is here again.

More and more radio fans are demanding outside aerials for better reception. Install KNOX—the insulator that assures customer satisfaction.

WRITE FOR CATALOG

Order from Your Jobber Now

KNOX PORCELAIN CORPORATION
KNOXVILLE TENNESSEE



In Buildings of Distinction

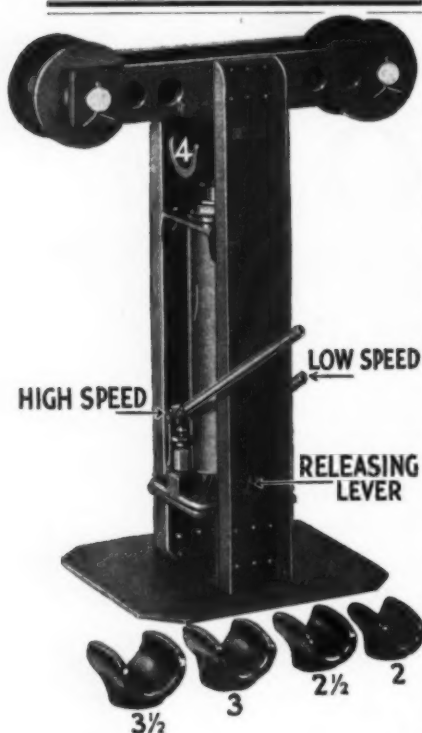
The Chicago Civic Opera Building offices and corridors are lighted efficiently and economically with Quad Lighting Units, the typical fixture being a semi-indirect unit of attractive design.

Quad Lighting equipment whether Ceiling Units, Swivel Stem Pendants or Dome Reflectors are recognized as meeting the highest standards of quality manufacture—efficient in operation and economical in maintenance.

Get details of complete line.

Quadrangle Manufacturing Co.
30 S. Peoria St., Chicago, Ill.





10 REASONS for using NEW 30 TON HYDRAULIC BENDER

1. Safety for men.
2. Easy to use.
3. Simple to adjust.
4. Speed control.
5. Hydraulic.
6. All bends uniform.
7. Light in weight.
8. Easy to move.
9. Strongly constructed.
10. Price.

Write for folder

**GUSTAVE LIDSEEN
INC.**

832-840 So. Central Ave.
CHICAGO, ILL.

what day the customer will call and make a point of having the article ready promptly.

DEMONSTRATION is not confined to show windows. A. F. Eggers, New York motor specialist, has converted his old shaft driven lathes and drill presses into direct drive operating machines. A customer came into the shop to make some inquiries regarding a job and noticed the arrangement. Eggers explained the advantages of the idea so enthusiastically that the customer had his own plant changed over to direct drive.

THE Kirk and Knight Electric Co., Pierre, S. D., has done an outstanding job of selling built-in ranges entirely on their own initiative. The minute a home or apartment is planned the partners, C. J. Kirkpatrick and Ralph Knight hop to it and try to sell the idea of built-in ranges. They have installed so many in their city that disinterested persons have spoken of it as a record. This company has especially trained men for this work.

BASEBALL field lighting has been developed to its fullest on the Pacific Coast recently since the original installation at Sacramento by Camp and French, contracting engineers of that city. Following this installation the same company installed lighting for the Fresno baseball park. In Oakland, the Scott-Buttner Electric Company of Oakland installed the recently dedicated lighting installation for the Oakland Club. In Portland, Oregon, the Jaggard-Srouffe Electric Company made the installation at the ball park there.

THE Brooklyn Modernization Committee is certainly on the job for new business. They recently secured a list of all unwired houses in Brooklyn. The names of the owners are being turned over to contractors as prospects for wiring.

G. F. LAUBE, Laube Electric Corp., Rochester, N. Y., is helping to spread the selling gospel by setting an example. He encourages his journeyman to sell both extra work, outlets and merchandise by paying them a commission on all orders they bring in. If a sale cannot be made during the first visit a memorandum of the customer's requirements is taken and filed for another attempt later on.

BOOKKEEPING on the job has been made so simple and effective by H. J. Ryan of Ryan Electric Co., Sioux City, Iowa, that he wouldn't give up his "job record" for any consideration. Entries are made throughout the day and added to when the day's work is completed. The record is primarily

Standardize
with
Standard

Complete line of Transformers



including
Power
Distribution
Signal
Control
Gaseous
Tube Sign
Instrument
Testing
Switchboard
and
Special
Trans-
formers

For Outdoor Service
Type MO

Write us today for
Bulletin describing our complete line or ask
us for recommendations.

The Standard Transformer Co.
WARREN, OHIO

CUT COSTS in ELECTRICAL CONSTRUCTION

Here's a high class tool for the high class workman that wants to get things done. It gets right down to business—no waiting—a surplus of heat at all times. Will do light brazing; economical to operate; sure speeds up work.



Flows
Solder in
40 Seconds

An adjustable electric arc supplies enough heat in 40 seconds to start work. Cut-off button enables workman to regulate heat.

5 Interchangeable Tips

Copper tips can be furnished in six styles suitable for all purposes. Extra tips for Junior tool, \$1.25 each.

**Junior
Tool
\$10**

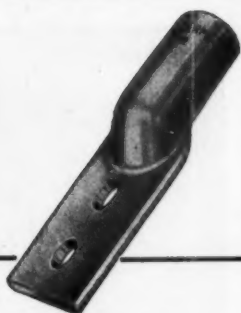
SODERWAND
Solders Like Magic

The Electric Arc Soldering Tool

JUNIOR TOOL, 13 inch, 10 oz., with tip as illustrated, complete.....\$10.00
SENIOR TOOL, 15 1/2 inch, 16 oz., tip as illustrated, complete.....\$14.00
PRICES \$1.00 higher west of Rockies.

Ask your jobber salesman, or order
direct from factory

SUTTLE EQUIPMENT COMPANY
LAWRENCEVILLE, ILL.



SHERMAN HEAVY DUTY SOLDERING LUGS

A complete
line, correct
in design to
meet every
heavy duty
need



Just what the name implies. Made of extra heavy pure copper tubing. SHERMAN Heavy Duty Soldering Lugs are made exactly to specifications prepared by the N. E. L. A. committee—designed by able engineers. As the world's largest makers of electrical connectors, SHERMAN offers this standardized line for convenience and economy. Made from the best grades of seamless copper tubing, dimensions consistently accurate and absolutely flat contact surfaces. Write for a sample SHERMAN heavy duty lug, stating the nature of the application.

Sold Thru Jobbers

H. B. SHERMAN MFG. CO.

Headquarters for all Terminals
Battle Creek, Mich.

for increasing efficiency on large jobs. A glance at its pages shows Mr. Ryan every activity of his men, including their time and what they have completed, also the exact amount of stock on the job, which in itself is a valuable aid in ordering additional material.

H. JENSEN, of Brooklyn, never runs a single additional outlet in one apartment if he can avoid it. When, at the insistence of the tenant, the owner orders this done, Jensen reminds him that other tenants will soon learn of this and they too will demand additional outlets. "Proper lighting and sufficient outlets," he points out, "are not only a good investment, but are much cheaper than vacant flats." Several complete jobs have been sold through taking the bull by the horns and showing the danger of favoring one tenant.

I RECENTLY talked with a motor specialist who used a small acetylene torch for soldering, etc., in the plants of his customers. On making a second call, after using the torch, he found that a dozen of his customers had bought a similar outfit, as it was useful in their own shops. It would seem that here is another product for the industrial specialist to handle.

THE Sioux City, Iowa, contractors held a get-together outing in July, inviting all the jobbers and other branches of the industry. The picnic was so successful that it will be made an annual affair. The program was voted a knockout by all the guests, who appreciated especially the moving pictures which were taken of the guests in action.

J. C. RESTON, an electrical contractor of Vancouver, B. C., apparently expected to stay in business for some time. He has just taken a ninety-nine year lease of property at 573 Hornby Street. The property has been leased as a permanent home for the Reston electrical business.

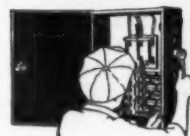
ONE Philadelphia contractor always carries a pocket full of business cards with him when he comes in an apartment building to see about a job. As he goes along he slips a card under each door. Just another simple way of advertising.

SAMUEL HUROWITZ of New York never needs to go over his office records for information on his business. All vital facts are recorded for him in a small loose leaf note book that shows at a glance the following: (1) A brief synopsis of the building contracts. (2) Outline of the specifications. (3) Financial report on the building. (4) All additions and credits by number. (5) Cost of the job by months

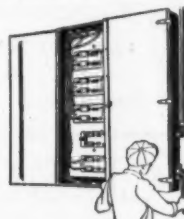
KNOCKOUTS ENLARGED in 1½ MIN. ♦

NO DRILLING **NO FILING**

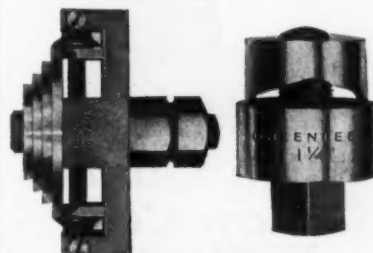
Electricians can now enlarge holes in switch and circuit cabinets, panel boards, etc., in one minute and one-half, or less . . . work that formerly took an hour. Greenlee Knockout Punches and Cutters will save you a tremendous amount of time and money on every job. They leave clean, round holes and are unusually easy to operate. Mail the coupon below and learn more about these Knockout Tools.



Cutting a 1" hole in an 8 circuit cabinet. Punch has 1½" clearance from a line switch while cutting hole.



Cutting a 3" conduit hole in a 200 Horsepower cabinet while the current is on.



GREENLEE KNOCKOUT TOOLS

GREENLEE TOOL CO.
Rockford, Ill.

Please send complete information on your Knockout Tools.

Firm.....
Name.....
Address.....
City.....
Jobber or Dealer.....
9-30

A BIG MONEY SAVER

Eliminates triple handling—unwinding—measuring and rewinding wire, thus saving time and money. Manually operated—reels wire into neat coil, automatically counting and registering number of feet. Strongly built of heavy selected materials so as to last a lifetime.

It Pays for Itself

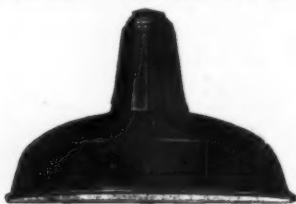
Send for bulletin.
Write us or your jobber.



**Minneapolis Electric
and Construction Co.**

80 S. 12th St.
Minneapolis Minn.

JACKSON



High Quality Low Cost Reflectors Bring MORE Sales

Contractors find that the low cost of JACKSON REFLECTORS sells them rapidly and returns big profits.

Built of ARMCO steel, covered with porcelain fire enamel full thickness, with clean threads and attaching rings, JACKSON REFLECTORS insure Customer Satisfaction.

Write for Bulletin and
Price List.

JACKSON ELECTRICAL CO.
910 W. VAN BUREN ST. - CHICAGO

for labor, material, and miscellaneous expenses. (6) List of special material used and the amount of money saved or spent above that estimated. (7) Accounts receivable and payable. (8) Daily bank balances.

WE asked Louis Freund, of New York, how he obtained his first electrical jobs when he started in business 27 years ago. He explained that he used to call on storekeepers at night and sell them on the idea of having electrically lighted show windows and stores instead of gas. He sold ten of these jobs the first two months he was in business, in addition to other work. There are still storekeepers who could be sold on the idea of better lighting.

OUT in Winner, S. D., L. V. Peterson has developed a remarkable volume in merchandise in connection with wiring. For instance, he built his own light plant at Wood, S. D., and has secured fifty-five current users already. He gets all the wiring, fixture and appliance business from these folks to the extent that he now maintains a store at Wood in addition to the main one at Winner.

THE Electric Service Co., Livermore, Calif., has gone out after business with the result that they are busy despite conditions. During the Rodeo which is the big annual event of the country, they attracted large crowds by installing an amplifier in front of their store over which entrants after the Rodeo broadcast.

THAT necessity is the mother of invention was again proved when one of the workmen for Walter Knapp, New York, forgot to bring a die stock on the job. Picking up a piece of two by four he chiseled out a square for the die. As he was working with $\frac{1}{2}$ in. pipe he removed $\frac{1}{2}$ in. knockout from an outlet box cover and fastened the cover to his improvised stock so that the pipe would run through the hole and meet the die squarely. It took fifteen minutes to make the stock.

A NEW YORK contractor was called into an apartment by an owner who was notorious for demanding a "cheap job." Before going into the apartment to make an estimate the contractor stopped to look at a house phone in the hall. "Well, what's the matter?" demanded the owner. "The switchplate is not plumb and there are four different kinds of screws with slots all running in different directions," observed the contractor. The owner looked at it and ordered it fixed. Thereafter this contractor did all the "fixing" for this man—and at a price that gave him a profit. Many an owner will bite the hand that has fed him bargain jobs.



Write for this free book that tells of the Better Pipe Tools

Write for this book today that shows, describes and gives prices of the Better Pipe Tools that make each job easier, give longer service, save time and muscle—that tells about the most complete line of pipe tools made, each of which is an improved tool, designed after exhaustive tests of all types and makes, tools with from five to fourteen major improvements a piece.

Write for Catalog P-10, then, remember to make it a point to look over these better tools next time you are at your supply house, to "feel" their balance, their handiness—to study their design and finish.

**ARMSTRONG BROS.
TOOL CO.**

"The Tool Holder People"
341 N. Francisco Ave.
Chicago, U.S.A.

ARMSTRONG BROS.

There's Gold in the Air!



And you can get it if you capitalize on the weather and push sales with the finest fan on the market today.

Meier Nuair
TRADE MARK REGISTERED

Write today for Distributor Proposition
MEIER ELECTRIC & MACHINE CO.
3525 East Washington Street
INDIANAPOLIS, IND. Inc. 1904

Color Lighting Equipment For Interiors and Exteriors



Reco Color Hoods
For lamps up to 60 watts.
(Full and half types.)



Laco Color Hoods
For lamps 75 w. to 500 w.
(Single or two tone effects.)



Color Plates
For flood lights, spots, etc.
(Also square and oblong in shape.)



Color Cylinders
For Street lighting units,
wall pockets and decorative
lighting effects.
(Made semi or full circular)

Headquarters for Color

Ask for Illustrated Pamphlet
"PROFITS FROM COLOR"

REYNOLDS
ELECTRIC COMPANY

MANUFACTURERS RECO SIGN FLASHERS
TRAFFIC CONTROLS, SMALL MOTORS, ETC.

2623 W. Congress St. - Chicago, Ill.

Electrical Modernization of Industry

(Continued from page 19)

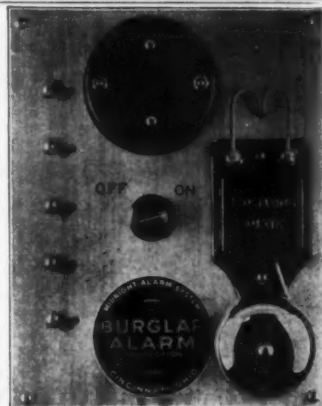
were twenty-five executives at this luncheon, all very busy men. Obviously, these men could not be expected to do the active work, but they did have authority and the power of spending money.

A group of second line men—men who had been designated by the various executives who sat in the first meeting were then called together. These 50 or 75 men met every day for three weeks and the modernization plan was debated from every angle. The result of the deliberations of this working committee was an organization of an Executive Committee, a Management Committee and a Borough Committee in each of the five Boroughs and in Westchester County.

The management of the plan was vested in a management committee which had meetings as called for by the general chairman. The personnel of this committee was carefully selected in order to formulate the plan. These men were selected for their capability in organization work, as well as for their knowledge of the needs and requirements necessary for electrically modernizing the industries.

This committee was representative not only of the association membership, but of the whole local electrical industry. The management committee consisted of a general chairman, an electrical contractor, a vice chairman representing all of the utilities, a chairman of each Borough committee, an electrical contractor and vice chairman, a power engineer of the utility in each Borough, plus the assistant secretary and director of development of the Electrical Association of New York.

The function of the management committee was to act as a clearing house on all proposals from the Borough committees, a copy of whose minutes were to be exchanged with each other Borough committee to keep each local group advised of the problems and details of operation, results and experiences of each individual group. It was a direct tie to the executive committee who controlled all policies and provided the necessary funds. The responsibility for the operation of the plan in each



NEW BURGLAR ALARM CONTROL

Operating on 3 dry cells the MIDNIGHT ALARM SYSTEM offers contractors the means of profitable wiring—you install it in the desired place and run wires to all doors and windows.

It's a simple job, too

Write for complete details and price lists

MIDNIGHT ALARM SYSTEM

2327 CHICKASAW STREET
CINCINNATI, OHIO U. S. A.

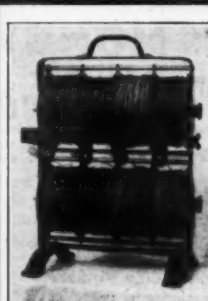


"I
Make
Money—
So Can
You!"

Each issue of the "Wiremold Business Builder"—sent free to Electrical Contractors on request—tells how you can make money—month by month—by following up the WIREMOLD "Modernization-with-Light" Campaign. Send in your name, now—don't miss a single issue.

WIREMOLD

"WBB" HEADQUARTERS
HARTFORD, CONNECTICUT



The
Security
Wire
Reel
Costs
Only
\$12.50

Designed for the Dispensing of Annunciator Wire in Installations and Repairs of Signaling Apparatus in Buildings.
Height, 20";
Width, 15";
Depth, 12";
Weight, 12 Lbs.

Its full capacity is 8 standard size spools or 8 spools of smaller size. The big feature of this remarkable device is that one man can operate it, feeding as many as eight different wires at a time from one floor, or any part of a building, without the slightest danger of snarling or bungling the wire at any time. This feature alone, saves the contractor many an hour of precious time on every job, yet it is only one of the SECURITY'S numerous advantages over old, cumbersome methods.

SEND THIS COUPON FOR FURTHER DATA

SECURITY APPLIANCE CO.
4016 W. 26th St., Chicago, Ill.
Gentlemen: Please send me further information and circular on The Security Wire Reel.

Name.....
Address.....
Your Jobber.....



COMPACT!

The "Handy-Andy" Vise Stand is light and compact yet rigid and strong enough for all work. No drilling necessary to attach hinged or chain vises to Stand. Bolts, nuts and rivets furnished. A great time and money saver that you cannot afford to be without. Obtain yours from your Jobber or write us direct.

"HANDY-ANDY"
VISE STAND
WESTERN WIRE PRODUCTS CO.
3rd and Spruce Sts.
ST. LOUIS, MO. U. S. A.

TIME IS MONEY-

The Jiffy Line

WILL SAVE YOU TIME...



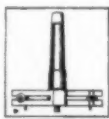
Box Cutter

**The Job
in
a Jiffy**



Pipe Bender

"Satisfaction guaranteed or your money back," has been and will continue to be the policy of this company. Let us send you literature describing our quality line of tools. Write us at once.



Drillpress Cutter

ESTABLISHED 1915
**PAUL W. KOCH
& COMPANY**

20 N. Wacker Drive, Chicago

Borough rests with its Borough committee.

Each of these Borough committees is divided into the following sub-committees: Advertising; Prospect List; Speakers; Finance and Engineering.

Each Borough group has a chairman, who is a contractor, a vice chairman for each of its five sub-committees constituting the Borough executive committee and a general sales manager as advisor. The engineering committee represents sales engineers of the various interests.

A headquarters was established in each Borough in addition to the general headquarters of the committee at the Electrical Association rooms.

A hand-book was compiled to bring the electrical contractors up-to-date on all industrial applications. This hand-book is in loose-leaf form and it is divided into twelve sections as follows: Illumination, Industrial Control, Industrial Heating, Material Handling, Motors, Refrigeration, Signals, Signs, Switchboards and Panels, Tools, Ventilating and Wiring. Each of these subjects represents the combined ideas of the various electrical groups interested in each particular subject, and the information therein will be changed from time to time as is expedient. This book contains general engineering and sales information on each of the subjects listed above in question and answer form. Over 200 experts were called in to prepare the data. It is, of course, kept free from all trade names. This hand-book sold at cost.

The electrical contractor registers in each Borough headquarters on a form prepared for the guidance of the committee. When inquiries are received, they are allocated to the proper Borough. The prospect is visited by a representative of the local executive committee and then posted on the large prospect board with a symbol indicating what that particular prospect is interested in, to-wit:

M—Modernization; IL—Industrial Lighting; IC—Industrial Control; V—Ventilation; IH—Industrial Heating; MH—Material Handling; S—Signalling; R—Refrigeration; N—New Building; ET—Electrical Tools.

The reason for this segregation is obvious and is a great help to the electrical contractor who registers

**USE
SRK**
(PATENTED)
A-1 & JR
**JIFFY
WIRE
CONNECTORS
for
SPEED**



Approved by

Underwriters Laboratories Factory Mutual Laboratories

ELIMINATE the old solder-type method. Jiffy "S R K" connectors are faster, safer and more dependable.

Save time and profit by using Jiffy connectors.

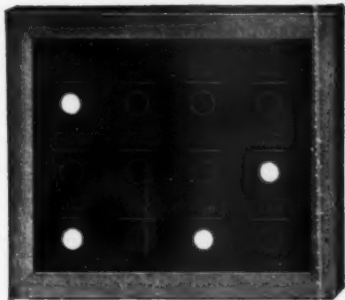
Samples on request

**JIFFY WIRE CONNECTOR CO.
HACKENSACK, N. J.**

General Sales Offices:
G. Denn Montgomery, Jr.
458 Broadway, New York City
Phone Canal 7533

**Beating
Competition
with Brains**

Competition is tough in the electrical contracting business these days; and every day it gets worse. Successful contractors have found they can beat fly-by-night competition best by using their brains, and by educating their responsible employees. You can help your head men to keep abreast of the times and save you money by sending each his own copy of **ELECTRICAL CONTRACTING**.



Annunciators and Push Buttons

For residences, banks, business offices, etc.—Holtzer-Cabot Annunciators and Push Buttons are simple, reliable and reasonably priced.

The Holtzer-Cabot Electric Co.
Executive Office and Factory
Boston, Mass.

New York Chicago Baltimore
Pittsburgh Philadelphia Cleveland
Detroit Syracuse Minneapolis
San Francisco Los Angeles

PIONEER MANUFACTURER OF COMPLETE SIGNALING SYSTEMS

with the secretary that he will contact with a number of prospects. After he makes the selection a little tag with his name printed thereon is thumb-tacked alongside of the prospect's name. Every other contractor can immediately see who is figuring on the work and the class of competition. The number of contractors is limited to not more than four or five to prevent over-running the prospect.

When a survey of the plant is necessary this is made by the engineering committee. After the survey has been prepared, based on the information contained in the prospect's registration sheet, three or four contractors are selected, having in view their ability to handle the work and to receive the surveys which they may retain for one week. The time may be extended by the local executive committee. Where the prospect indicates a particular electrical contractor, that contractor alone receives the survey for a period of one week, and, unless results are secured, it is within the province of the executive committee to give this prospect to other electrical contractors. This is a very important phase of the working of the plan and to prevent any question of favoritism, you will note that the executive committee of each Borough consists of two contractors, two representatives of the wholesalers and manufacturers and one of the utility. Their decision is final.

The manufacturers have been very active in tying in their own selling campaigns to this modernization movement. The plan itself comprises nothing new and uses no agencies not heretofore ready and willing to serve. It is simply a co-ordinated intensive campaign to bring to the public of New York any particular advantages of proper electrification.

This is not a movement, as far as New York is concerned, to increase the membership of the Electrical Association of New York. It is not a plan for or by the utility company. It is not a plan for or against union labor. It is not an attempt to drive out the small contractor or build up the large contractor, but it is just an offer to aid and assist industrial New York in matters electrical and incidentally to give the electrical contractor an opportunity to figure on five times the amount of work that he would normally figure on with a five to one chance of securing the business.

NEW! BELL and BUZZER Enclosed Combination

DEPENDABLE



ATTRACTIVE

No. 20 combination bell and buzzer totally enclosed, removes gong, hammer and wiring from sight, giving a neat flush mount appearance.

Finished in French gray enamel.

Operates on 1, 2 or 3 dry cells or bell-ringing transformer.

Can be connected to use bell or buzzer alone.

Write or Wire for
Descriptive Literature

LIBERTY BELL MFG. CO., INC.
MINERVA OHIO

"DETROIT" RUBBER COVERED WIRES

(Reg. U. S. Pat. Office)

RUBBER INSULATED
WIRES AND CABLES

LAMP CORDS

PARKWAY CABLES

LEAD ENCASED
RUBBER INSULATED
WIRES AND CABLES

"OK" A.B.C. ARMORED
WIRES

FLEXIBLE METALLIC
CONDUIT

Detroit Insulated Wire Company
Detroit, Mich.

Division of General Cable Corporation

There's Nothing Like IDEALS

Here's
Why!



Copper coated, tapered spring insert bites RIGHT. No snapping off of wires—and the heavier the pull the stronger it holds.

Contractors landing some of the best and biggest jobs
STANDARDIZE on
IDEALS.

One size for all
common wiring and
fixture joints.

Mail
Coupon
Today!



Approved by Underwriters and Factory Mutual Laboratories. Fully protected by BABCO PATENTS.

Ideal Commutator Dresser Co. (936)
1041 Park Ave., Sycamore, Ill.

☐ Please send me one trial carton of 100 "Standard Universal" Connectors at \$3.35.

☐ Please send me a free connector.

☐ Full information on Bowius Boring Machine.

Name.....

Address.....

City.....State.....

Jobber.....

Manufacturers News

A department for the announcement of activities of manufacturers that are of interest to contractors, such as changes in executive personnel, branch offices, new products, etc.

Graybar Features Red Seal in National Broadcast

Featuring the Red Seal wiring plan of the Society for Electrical Development, the Graybar Electric Co., New York, concluded its evening radio program on August 12 with an admonition that "Mr. and Mrs." would have been spared a deal of embarrassment in entertaining a celebrated guest on that night had their home been wired to the adequate standards of the Red Seal plan.

In this particular broadcast difficulties were experienced due to improper lighting and electrical appliances.

At the close of this hour the station announcer explained that had the house wiring been up to Red Seal specifications all inconvenience would have been obviated.

* * *

Loomis Vice-President of Consolidated Lamp

Franklin W. Loomis, formerly development and lighting engineer for Consolidated Lamp & Glass Co., Coraopolis, Pa., has been appointed vice-president and sales manager of the company.

* * *

Curtis Publishes "The Lighting Book"

Curtis Lighting, Inc., Chicago, Ill., has just published "The Lighting Book" by J. L. Stair, its chief engineer.

This book, consisting of 315 pages, is one of reference for the planning of practical and artistic illumination for all types of interiors and exteriors. The contents are Part One, "History of the Lighting Art;" Part Two, "The Story of Curtis Lighting;" Part Three, "Engineered Lighting;" Part Four, "Modern Lighting Practice" and Part Five, "Planning

Lighting Systems." The book, which is profusely illustrated, describes the progress that has been made in the artistic, utilitarian and hygienic application of lighting.

* * *

Cutler-Hammer Acquires Reynolite Division

Effective August 1, 1930, the Reynolite Division of the Reynolds Spring Co., Jackson, Michigan, became the wholly owned subsidiary of Cutler-Hammer, Inc. This transaction brought into the constantly growing Cutler-Hammer line, the well known and widely sold Reynolite products; bakelite flush plates, plural plugs, etc. It is said that the Reynolite name marked the first flush plates molded of bakelite and today marks the most complete line of such plates.



HOLE-IN-ONE CLUB MEMBER ATTENDS CONVENTION: John G. (Jack) Searls, general sales manager, Indiana Rubber & Insulated Wire Co., who attended the Electragists Convention at Milwaukee, recently made the Hole-in-One Club at the eighth hole at the Meshingomesia Club, Marion, Ind. Jack is attempting a 5 ft. putt while Frank Dolan hopes he doesn't make it.

G. E. Forms Building Equipment Organization

The Merchandise Department of the General Electric Company announces the formation of a building equipment organization. This new organization will co-operate with architects, engineers and contractors and will function in connection with electrical construction materials.

* * *

Appleton Purchases National Appliance Line

The complete line of National floodlight projectors, formerly manufactured by the National Appliance Co., of Jackson, Mich., has been purchased by the Appleton Electric Co., Chicago. This line hereafter will become part of the Appleton line of electrical material.

* * *

Youngstown Issues Hand-book

The Youngstown Sheet & Tube Co., Youngstown, Ohio, has published a loose-leaf catalog on rigid steel conduit. This is a hand-book of useful wiring tables of all kinds, and illustrated with pictures and diagrams. The booklet contains 127 pages and new sheets containing corrections and revisions will be added from time to time.

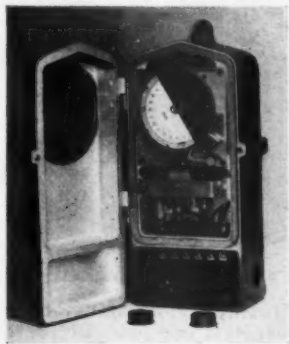
* * *

The Photo-Electric Division of Arcturus Radio Tube Company, Newark, N. J., has just published a booklet entitled "The Photolytic Cell."

* * *

Bulletin No. S-30 has been published by Mullenbach Electrical Manufacturing Co., Los Angeles, Calif. This bulletin describes switchboards and panel boards and is complete with illustrations.

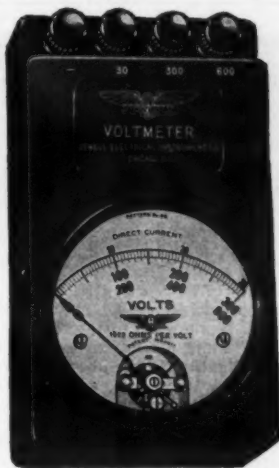
New Electrical Products



The Sangamo Electric Co., Springfield, Ill., announces an electrically-wound time switch for a.c. or d.c. having a capacity of 20 amp. 115 volt, or 15 amp. 230 volts, either in single or double pole construction. Mercury contact tubes are used, and either single throw or double throw switches may be supplied. Two types of bases are furnished, type TC for conduit connection and type T with regular watt-hour meter terminals. A small alternating current motor, through one side of a differential gear, winds the main spring. Other side of differential is directly connected to a bell crank mechanism used in tilting tube. Time-keeping qualities are governed by the Hamilton escapement. Switch is provided with a 24-hour dial.



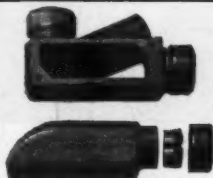
Frank Adam Electric Co., St. Louis, Mo., announces a new leader type LNTP panelboard and cabinet made in one piece of natural brown Bakelite with stippled finish face. This unit has a 30 Amp., S.P. tumbler switch with Bakelite handle; riveted center contact for plug fuse supported on insulating base; branch circuit wire terminal connector; 4 in. wiring gutter all around; adjustable trim fastening device; main bus bar mounted on edge; one-piece galvanized steel mounting back; four mounting slots instead of holes; catch lock on doors 48 in. or less in height and embossed circuit number plate.



Jewell Electrical Instrument Co., Chicago, Ill., announces a d.c. voltmeter especially built for radio service work. This is a 3-range instrument with sales of 30, 300 and 600 volts. The meter has a resistance of 1000 ohms per volt in all ranges. Instrument also has molded bakelite case and is provided with test leads and prods.



A decorated diffused glass panel light for bath-room and general lighting in home or building is being manufactured by Frank's Electric Co., Indianapolis, Ind. This lighting unit consists of box type reflector with sockets installed in box, recessed in wall with hand-painted diffused glass set in frame.



The Adapti Co., Cleveland, Ohio, is manufacturing standard rigid conduit fittings, known as rectangular threadless Adaptilets, comprising of ells, end fittings, etc., to meet all requirements; a corresponding line of switch boxes of round and rectangular "gang-switch" types and threadless couplings and connectors. These are made in sizes up to and including 1 in. and are designed to take same covers, receptacles and wiring devices as corresponding threaded types.



The Bryant Electric Co., Bridgeport, Conn., announces No. 4832 brown Bakelite duplex flush receptacle for plate without doors. Each outlet is approved for 15 amp., 125 volt; 10 amp., 250 volt; base is 2 3/4 in. x 1 1/2 in.; depth 3 1/2 in. Supporting screw spacing 3 3/4 in. Plate mounting screw is grounded to yoke; provided with plaster ears integral with yoke and each side wiring terminal has two No. 8 binding screws.



An extra large and heavy tool chest made of 14 gauge steel with handles on each end and baked enamel finish has been manufactured by All-Steel-Equip Co., Aurora, Ill. It is reinforced by bands on top, bottom and around cover. It also has a hasp and staple for padlocking.

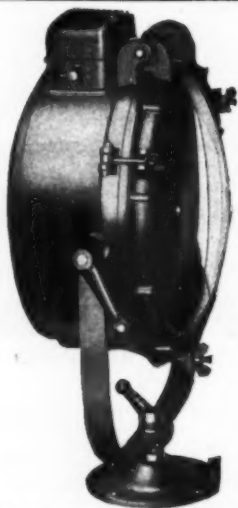


Westinghouse Electric & Mfg. Co., Pittsburgh, Pa., is manufacturing a chromilite window floodlight for supplementing the illumination afforded by show window reflectors or where color effects are desired. The reflector is made of chromium plated sheet brass with a small cast swivel base permitting mounting on wall or ceiling. This floodlight is also suitable for colored interior illumination for which a film holder and gelatin films are supplied.

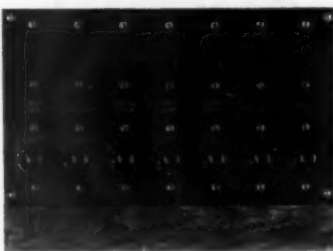
New Electrical Products



Thomas & Betts Co., New York City, announces a complete line of fittings for thin walled metallic tubing. Box connectors, couplings, pipe straps and 90 deg. angle box connectors are all made from certified malleable iron castings, machined and plated with Tabolite. No. 4201 box connector illustrated is made in all sizes up through 1 in. with beveled brass rings which compress around and grip tubing with heavily ribbed malleable iron bushings. Both fittings make a watertight joint with the tubing. The box connector has a standard thread and is supplied with T&B fast working notched locknut for locking the connector in the box. No. 4220, 90 deg. angle box connector also illustrated has a standard thread supplied with two T&B notched locknuts. This line also includes No. 4151 coupling for electrical metallic tubing and No. 4175 malleable iron pipe straps.



Reflector & Illuminating Co., Chicago, announces a construction work floodlight equipped with a shatter-resisting silver-plated glass reflector. This unit is adjustable for 500 to 1000 watt type "C" PS lamps and beam spread of from 12 to 90 deg.



General Electric Co., Schenectady, N. Y., is manufacturing a central control station for airport lights, with indicating lights protected from damage by compound shields; each light is wired in the actual circuit controlled, providing indication of the condition of that circuit. The control panel is so designed that any type mounting may be used, such as wall mounting, table or desk or mounted on a special pedestal.



Multi Electrical Manufacturing Co., Chicago, Ill., announces a cross-arm and hanger combination, known as No. 842-M, of rigid-grip type for overhead illumination of miniature golf courses. This unit has a broad metal strap clamping on supporting cable and is weatherproof, well-balanced and adaptable to any reflector.



The Pittsburgh Reflector Co., Pittsburgh, Pa., announces a low-priced line of indirect luminaires as a companion reflector to the higher priced A-5 indirect luminaire. The same permafectors, B-200 and B-501, respectively, are used in this new line as in the DeLux type A luminaire. This unit consists of spun copper bowl, suspended from the socket, by means of detachable steel arms. Canopy is of spun copper, stem of brass tubing and chain of steel. All external parts of fixture are finished in dark monumental bronze.



Edwards & Co., New York City, announces a one-piece, all Bakelite push button, known as No. 615. This is a small, neatly designed unit of mottled brown finish with screws of same finish. Binding posts are upset and large enough for No. 14 wire. Dimensions are 1 3/8 in. high, 1 3/8 in. wide and 1/8 in. deep. No. 616 is identical to above only is card-holder type, dimensions being 2 3/8 in. high, 1 3/4 in. wide and 1/8 in. deep.



The Arrow Electric Division of Arrow-Hart & Hegeman Electric Co. announces No. 7736 locking ring and parallel or tandem blade locking attachment plug caps RE and TE. This ring may be attached to all single convenience outlet plates and when used with attachment plug caps a permanent connection between cap and receptacle is formed. The cap is easily locked in place by turning to the right the swivel bracket.



Arcolux sign reflector for lighting circular and other small signs is announced by Wheeler Reflector Co., Boston, Mass. This is a one-piece unit, with removable top cap permitting easy access to socket for wiring. Installation and wiring are simple and quick operations. Pipe and wires lead straight into a side pipe outlet and socket is easily wired in one operation. Arcolux is made in two sizes, 100 watt reflector and lamp for bright locations and 60 watt reflector and lamp for dark locations.

IT'S PORTABLE

Carry the Martin Vice Stand and Pipe Bender with you... anywhere; set it up in one-half minute. Will not skid or tilt. A genuine TIME SAVER for cutting or threading conduit up to 2 1/2". Bending capacity 3/4". Write to



H. P. MARTIN & SONS
800 W. 12th St.
OWENSBORO, KY.

MARTIN VISE STAND AND PIPE BENDER

SILVEY HICKEYS

Won't Slip, Crush nor Kink



A deep groove on the inside of the bend removes pressure where pipe is shortening and thickening; allows it to flow outward instead of pushing it inward. Compare its work with work done by any other hickey. Get a set. Your money back if you're dissatisfied for any reason. Thousands sold without complaint. Electricians

Made in 3/4", 1", and 1 1/2" sizes. Patented.

Ask Your Jobber

Jobbers everywhere have Silvey Hickeys in stock. If yours will not supply you, we will ship direct.

SILVEY PIPE BENDER COMPANY
2125 Brighton Ave. Kansas City, Mo.

E-Z WIRE STRIPPER

A HANDY TOOL



This inexpensive tool strips wire of 10 to 20 gauge 20 times faster than usual methods.

A MONEY BACK GUARANTEE with every E-Z Wire Stripper. Send for yours now.

\$5⁰⁰ LIST

PYRAMID PRODUCTS CO.

2315 South State Street Chicago, Ill.

Keep Up-to-Date

By reading these pages you will acquaint yourself with what is newest and best in electrical supplies and equipment.

When communicating with an advertiser mention

Electrical Contracting

Westinghouse Appoints Whiting Official

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa. announces the appointment of Fred T. Whiting of Chicago as assistant manager of the northwest district of the company under N. G. Symonds, recently appointed commercial vice-president.

Mr. Whiting has been with the Westinghouse company since his graduation from the Iowa State College in 1913 and served in different capacities until June 1921 when he became industrial manager, which position he held until his appointment as assistant district manager.

* * *

The following new bulletins have been issued by the General Electric Co., Schenectady, N. Y.:

GEA-982B superseding GEA-982-A entitled "Airport Illumination", describing typical lighting equipment for airports, including boundary lights, floodlights, air marking signs, etc.

Bulletins GEA-192F superseding GEA-192E; GEA-579A superseding GEA-579; GEA-708A superseding GEA-708; GEA-754A superseding GEA-754; GEA-771A superseding GEA-771; GEA-1052A superseding GEA-1052; GEA-1266; GEA-1265A superseding GEA-1265; GEA-1292; GEA-722B entitled "Selsyns for Remote Signaling, Control and Indication"; GEK-63 on Floodlighting and a bulletin entitled "General Electric 'Where-To-Buy-It' Service."

* * *

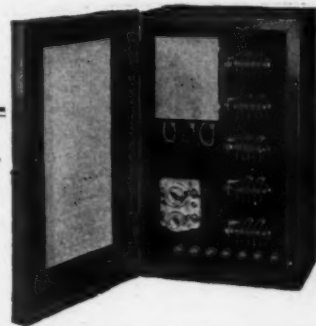
Reynolds Electric Co., Chicago, has issued bulletin No. 80, describing a complete line of color hoods, color plates and color cylinders.

* * *

Wagner Electric Corporation, St. Louis, Mo., announces the combination of sales office and service station for the Atlanta territory and the installation of both in the new fire-proof building at 14-20 Alexander Street, N. W., Atlanta, Ga.

* * *

The Connecticut Telephone & Electric Corporation, Meriden, Conn., is distributing an extensive catalog covering its signal systems and intercommunicating telephones.

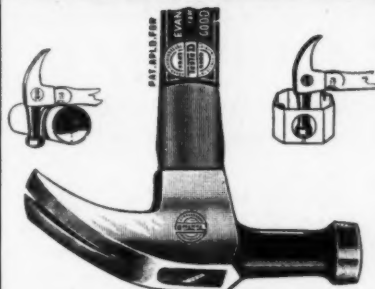


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